


# SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name	<b>Control DNA; part of 'AlkPhos Direct™ Labelling module, For 2,500 cm<sup>2</sup> membrane'</b>
Catalogue Number	RPN3680  9 0 R P N 3 6 8 0
Component Number	NIF822
Product description	Not available.
Product type	Liquid.
Other means of identification	Not available.

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Analytical chemistry.  
Laboratory chemicals  
Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 0800 515 313	<b>Hours of operation</b> 08.30 - 17.00
	<b>Person who prepared the MSDS :</b> sds_author@cytiva.com	

<b>United Kingdom (UK)</b>	Cytiva UK Amersham Place Little Chalfont Buckinghamshire HP7 9NA t: 0870 606 1921	<b>1.4 Emergency telephone number</b> Call INFOTRAC 24 Hour number: 001-352-323-3500 (Call Collect).
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### National advisory body/Poison Centre

**United Kingdom (UK)** Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE [www.toxbase.org](http://www.toxbase.org) .

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:  
In England and Wales: NHS Direct - 0845 4647 or 111  
In Scotland: NHS 24 - 08454 24 24 24  
In N Ireland: Contact your local GP or pharmacist during normal hours; click here ([www.gpoutofhours.hscni.net/](http://www.gpoutofhours.hscni.net/)) for GP services Out-of-Hours.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** Mixture

#### **Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** Not applicable.

**Ingredients of unknown ecotoxicity** Not applicable.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### **Hazard pictograms**

**Signal word** No signal word.

**Hazard statements** No known significant effects or critical hazards.

#### **Precautionary statements**

**Prevention** Not applicable.

**Response** Not applicable.

**Storage** Not applicable.

**Disposal** Not applicable.

#### **Hazardous ingredients**

**Supplemental label elements** Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Not applicable.

#### **Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** Not applicable.

**Tactile warning of danger** Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

#### **Type**

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy



## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	No specific treatment.

See toxicological information (Section 11)

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** No specific data.

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**Small spill** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.



<b>Large spill</b>	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.
<b>6.4 Reference to other sections</b>	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

<b>Protective measures</b>	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

<b>Recommendations</b>	Analytical chemistry. Laboratory chemicals. Scientific research and development.
<b>Industrial sector specific solutions</b>	Not available.

## SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### **Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DELs available.

#### PNECs

No PECs available.

### 8.2 Exposure controls

<b>Appropriate engineering controls</b>	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
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#### Individual protection measures

##### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

##### **Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection



<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
<b>Body protection</b>	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Other skin protection</b>	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
<b>Environmental exposure controls</b>	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	0°C
<b>Initial boiling point and boiling range</b>	100°C
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

### 9.2 Other information

<b>Burning time</b>	Not applicable.
<b>Burning rate</b>	Not applicable.
<b>Solubility in water</b>	Not available.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	No specific data.
<b>10.5 Incompatible materials</b>	No specific data.
<b>10.6 Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.



## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Conclusion/Summary Not available.

#### Acute toxicity estimates

N/A

#### Irritation/Corrosion

Conclusion/Summary Not available.

#### Sensitisation

Conclusion/Summary Not available.

#### Mutagenicity

Conclusion/Summary Not available.

#### Carcinogenicity

Conclusion/Summary Not available.

#### Reproductive toxicity

Conclusion/Summary Not available.

#### Teratogenicity

Conclusion/Summary Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

**Information on likely routes of exposure** Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

**Inhalation** No known significant effects or critical hazards.

**Ingestion** No known significant effects or critical hazards.

**Skin contact** No known significant effects or critical hazards.

**Eye contact** No known significant effects or critical hazards.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Inhalation** No specific data.

**Ingestion** No specific data.

**Skin contact** No specific data.

**Eye contact** No specific data.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

##### Short term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

##### Long term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

#### Potential chronic health effects

Not available.

**Conclusion/Summary** Not available.

**General** No known significant effects or critical hazards.

**Carcinogenicity** No known significant effects or critical hazards.



<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary** Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** Not known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-



**14.6 Special precautions for user**      **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**      Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### **Annex XIV**

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**      Not applicable.

#### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air**      Not listed

**Industrial emissions (integrated pollution prevention and control) - Water**      Not listed

#### Ozone depleting substances (1005/2009/EU)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

#### International regulations

##### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

##### Montreal Protocol (Annexes A, B, C, E)

Not listed.

##### Stockholm Convention on Persistent Organic Pollutants

Not listed.

##### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

##### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

#### Inventory list

**Europe**      All components are listed or exempted.

**United States**      All components are listed or exempted.

**Canada inventory**      All components are listed or exempted.

**China**      All components are listed or exempted.

**Japan**      **Japan inventory (ENCS):** All components are listed or exempted.  
**Japan inventory (ISHL):** Not determined.

**15.2 Chemical safety assessment**      This product contains substances for which Chemical Safety Assessments are still required.





**SECTION 16: Other information**

 Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
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**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements** Not applicable.

**Full text of classifications [CLP/ GHS]** Not applicable.

**Date of printing** 28 April 2021

**Date of issue/ Date of revision** 28 April 2021

**Date of previous issue** 17 December 2019

**Version** 10

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.




# SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name	<b>AlkPhos Direct™ Labelling module, For 2,500 cm<sup>2</sup> membrane</b>	
Catalogue Number	RPN3680	 9 0 R P N 3 6 8 0
Product description	Not available.	
Product type	Liquid.	
Other means of identification	Not available.	

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Analytical chemistry.  
Laboratory chemicals  
Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 0800 515 313	<b>Hours of operation</b> 08.30 - 17.00
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**Person who prepared the MSDS :** sds\_author@cytiva.com

<b>United Kingdom (UK)</b>	Cytiva UK Amersham Place Little Chalfont Buckinghamshire HP7 9NA t: 0870 606 1921	<b>1.4 Emergency telephone number</b> Call INFOTRAC 24 Hour number: 001-352-323-3500 (Call Collect).
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### National advisory body/Poison Centre

**United Kingdom (UK)** Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE [www.toxbase.org](http://www.toxbase.org) .

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:  
In England and Wales: NHS Direct - 0845 4647 or 111  
In Scotland: NHS 24 - 08454 24 24 24  
In N Ireland: Contact your local GP or pharmacist during normal hours; click here ([www.gpoutofhours.hscni.net/](http://www.gpoutofhours.hscni.net/) ) for GP services Out-of-Hours.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** Mixture

#### **Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Flam. Liq. 3, H226  
Acute Tox. 4, H302  
Skin Sens. 1, H317  
Muta. 2, H341  
Carc. 1B, H350  
STOT SE 1, H370

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** Not applicable.

**Ingredients of unknown ecotoxicity** Not applicable.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### **Hazard pictograms**



**Signal word** Danger

**Hazard statements** Flammable liquid and vapour.  
Harmful if swallowed.  
May cause an allergic skin reaction.  
May cause cancer.  
Suspected of causing genetic defects.  
Causes damage to organs.

#### **Precautionary statements**

**Prevention** Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapour.

**Response** F ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

**Storage** Store locked up.

**Disposal** Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** Methanol  
formaldehyde

**Supplemental label elements** Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Restricted to professional users.

#### **Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** Not applicable.

**Tactile warning of danger** Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** None known.

## SECTION 3: Composition/information on ingredients

## 3.2 Mixtures

Mixture

Product/ingredient name	Identifiers	%	Classification	
			Regulation (EC) No. 1272/2008 [CLP]	Type
methanol	REACH #: 01-2119433307-44 EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	10	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370	[1] [2]
formaldehyde	REACH #: 01-2119488953-20 EC: 200-001-8 CAS: 50-00-0 Index: 605-001-00-5	4 - 5	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1B, H314 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335  See Section 16 for the full text of the H statements declared above.	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

**Type**

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

## 4.1 Description of first aid measures

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Skin contact</b>	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

## 4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	No specific data.



**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** No specific treatment.

See toxicological information (Section 11)

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

**Suitable extinguishing media** Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** Do not use water jet.

**5.2 Special hazards arising from the substance or mixture**

**Hazards from the substance or mixture** **F** Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

**Hazardous combustion products** Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**5.3 Advice for firefighters**

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

**Small spill** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

**6.4 Reference to other sections**

See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**7.1 Precautions for safe handling**

**Protective measures**

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**Seveso Directive - Reporting thresholds (in tonnes)****Danger criteria**

Category	Notification and MAPP threshold	Safety report threshold
H3	50	200
P5c	5000	50000

**7.3 Specific end use(s)****Recommendations**

Analytical chemistry. Laboratory chemicals. Scientific research and development.

**Industrial sector specific solutions**

Not available.

**SECTION 8: Exposure controls/personal protection**

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario (s).

**8.1 Control parameters****Occupational exposure limits**

Product/ingredient name	Exposure limit values
methanol	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). Absorbed through skin.</b> STEL: 333 mg/m <sup>3</sup> 15 minutes. STEL: 250 ppm 15 minutes. TWA: 266 mg/m <sup>3</sup> 8 hours. TWA: 200 ppm 8 hours.
formaldehyde	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018).</b> STEL: 2.5 mg/m <sup>3</sup> 15 minutes. STEL: 2 ppm 15 minutes. TWA: 2.5 mg/m <sup>3</sup> 8 hours. TWA: 2 ppm 8 hours.

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

Product/ingredient name	Type	Exposure	Value	Population	Effects	
methanol	DNEL	Short term Dermal	8 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	8 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Dermal	40 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	50 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	50 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	50 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	50 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	260 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Inhalation	260 mg/m <sup>3</sup>	Workers	Systemic	
	formaldehyde	DNEL	Long term Inhalation	0.1 mg/m <sup>3</sup>	General population	Local
		DNEL	Long term Inhalation	0.5 mg/m <sup>3</sup>	Workers	Local
DNEL		Short term Inhalation	1 mg/m <sup>3</sup>	Workers	Local	
DNEL		Long term Inhalation	3.2 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Oral	4.1 mg/kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	9 mg/m <sup>3</sup>	Workers	Systemic	
DNEL		Long term Dermal	102 mg/kg bw/day	General population	Systemic	
DNEL		Long term Dermal	240 mg/kg bw/day	Workers	Systemic	

**PNECs**

No PECs available.

**8.2 Exposure controls****Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Individual protection measures****Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection****Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

**Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.



## SECTION 9: Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

**Appearance**

<b>Physical state</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Pungent. [Slight]
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Closed cup: 37.8 to 61°C
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Easily soluble in the following materials: cold water, hot water and methanol.
<b>Partition coefficient: n-octanol/ water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

## 9.2 Other information

<b>Burning time</b>	Not applicable.
<b>Burning rate</b>	Not applicable.
<b>Solubility in water</b>	Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** The product is stable.

**10.3 Possibility of hazardous reactions** Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**10.5 Incompatible materials** Reactive or incompatible with the following materials:  
oxidizing materials

**10.6 Hazardous decomposition products** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
formaldehyde	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
	LD50 Dermal	Rabbit	270 mg/kg	-
	LD50 Oral	Rat	100 mg/kg	-

**Conclusion/Summary** Harmful if swallowed or in contact with skin.





**Acute toxicity estimates**

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
☑ Cross-linker - NIF1348 - GROUP	706.9	2050	N/A	21.2	N/A
methanol	100	300	64000	3	N/A
formaldehyde	100	270	N/A	3	N/A

**Irritation/Corrosion**

**Conclusion/Summary** Not available.

**Sensitisation**

**Conclusion/Summary**

**Skin** May cause an allergic skin reaction.

**Mutagenicity**

**Conclusion/Summary** Suspected of causing genetic defects.

**Carcinogenicity**

**Conclusion/Summary** May cause cancer.

**Reproductive toxicity**

**Conclusion/Summary** Not available.

**Teratogenicity**

**Conclusion/Summary** Not available.

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
methanol	Category 1	Not determined	Not determined
formaldehyde	Category 3	Not applicable.	Respiratory tract irritation

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on likely routes of exposure** Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

**Inhalation** ☑ Causes damage to organs following a single exposure if inhaled.

**Ingestion** ☑ Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

**Skin contact** ☑ Causes damage to organs following a single exposure in contact with skin. May cause an allergic skin reaction.

**Eye contact** No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Inhalation** No specific data.

**Ingestion** No specific data.

**Skin contact** Adverse symptoms may include the following:  
irritation  
redness

**Eye contact** No specific data.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure**

**Potential immediate effects** Harmful if swallowed or in contact with skin.

**Potential delayed effects** Causes damage to organs.

**Long term exposure**

**Potential immediate effects** Harmful if swallowed or in contact with skin.

**Potential delayed effects** Suspected of causing genetic defects.

**Potential chronic health effects**

Not available.



<b>Conclusion/Summary</b>	Not available.
<b>General</b>	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
<b>Carcinogenicity</b>	May cause cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	Suspected of causing genetic defects.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
methanol       formaldehyde	Acute EC50 16.912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 3.48 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 3.05 mg/l Marine water	Algae - Isochrysis galbana - Exponential growth phase	96 hours
	Acute EC50 12.98 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 3.26 mg/l Fresh water	Daphnia - Daphnia magna - Embryo	48 hours
	Acute LC50 1.41 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Chronic NOEC 1.56 mg/l Fresh water	Fish - Oreochromis niloticus - Fingerling	12 weeks	

**Conclusion/Summary** Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
methanol	Fresh water 1 to 10 days, 4 to 30°C	-	Readily
formaldehyde	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
methanol	-0.77	<10	low
formaldehyde	0.35	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

##### Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

##### Hazardous waste





The classification of the product may meet the criteria for a hazardous waste.

#### Packaging



<b>Methods of disposal</b>	The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
<b>Special precautions</b>	This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	UN1987	UN1987	UN1987	UN1987
<b>14.2 UN proper shipping name</b>	ALCOHOLS, N.O.S. (methanol, mixture)	ALCOHOLS, N.O.S. (methanol, mixture)	ALCOHOLS, N.O.S. (methanol, mixture)	ALCOHOLS, N.O.S. (methanol, mixture)
<b>14.3 Transport hazard class(es)</b>	3 	3 	3 	3 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-

**14.6 Special precautions for user**      **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**      Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### **Annex XIV**

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**      Restricted to professional users.

##### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air**      Not listed

**Industrial emissions (integrated pollution prevention and control) - Water**      Not listed

##### Ozone depleting substances (1005/2009/EU)

Not listed.

##### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

##### Seveso Directive

This product is controlled under the Seveso Directive.



**Danger criteria****Category**H3  
P5c**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol (Annexes A, B, C, E)**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

<b>Europe</b>	All components are listed or exempted.
<b>United States</b>	All components are listed or exempted.
<b>Canada inventory</b>	All components are listed or exempted.
<b>China</b>	All components are listed or exempted.
<b>Japan</b>	<b>Japan inventory (ENCS):</b> All components are listed or exempted. <b>Japan inventory (ISHL):</b> Not determined.

**15.2 Chemical safety assessment**

This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms**

ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 1, H370	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method

**Full text of abbreviated H statements**

H225 Highly flammable liquid and vapour.  
 H226 Flammable liquid and vapour.  
 H301 Toxic if swallowed.  
 H302 Harmful if swallowed.  
 H311 Toxic in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H331 Toxic if inhaled.  
 H335 May cause respiratory irritation.  
 H341 Suspected of causing genetic defects.  
 H350 May cause cancer.  
 H370 Causes damage to organs.

**Full text of classifications [CLP/GHS]**

Acute Tox. 3, H301 ACUTE TOXICITY (oral) - Category 3  
 Acute Tox. 3, H311 ACUTE TOXICITY (dermal) - Category 3  
 Acute Tox. 3, H331 ACUTE TOXICITY (inhalation) - Category 3  
 Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4  
 Carc. 1B, H350 CARCINOGENICITY - Category 1B  
 Flam. Liq. 2, H225 FLAMMABLE LIQUIDS - Category 2  
 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3  
 Muta. 2, H341 GERM CELL MUTAGENICITY - Category 2  
 Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B



Skin Sens. 1, H317	SKIN SENSITISATION - Category 1
STOT SE 1, H370	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

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**Version** 11

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.




# SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** **Water; part of 'AlkPhos Direct™ Labelling module, For 2,500 cm<sup>2</sup> membrane'**

**Catalogue Number** **RPN3680**   
9 0 R P N 3 6 8 0

**Component Number** **NIF107**

**EC number** Not available.

#### REACH Registration number

Registration number	Legal entity
Exempt from REACH: According to the provisions of Article 2(7)(a) and Annex IV of REACH	-

**CAS number**  Not available.

**Product description** Not available.

**Product type** Liquid.

**Other means of identification** Not available.

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Analytical chemistry.  
Laboratory chemicals  
Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

**Supplier** Cytiva  
Amersham Place  
Little Chalfont  
Buckinghamshire  
HP7 9NA United Kingdom  
+44 0800 515 313

**Hours of operation**  
08.30 - 17.00

**Person who prepared the MSDS :** sds\_author@cytiva.com

**United Kingdom (UK)** Cytiva UK  
Amersham Place  
Little Chalfont  
Buckinghamshire  
HP7 9NA  
t: 0870 606 1921

**1.4 Emergency telephone number**  
Call INFOTRAC 24 Hour number:  
001-352-323-3500 (Call Collect).

#### National advisory body/Poison Centre

**United Kingdom (UK)**

Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE [www.toxbase.org](http://www.toxbase.org) .

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:  
 In England and Wales: NHS Direct - 0845 4647 or 111  
 In Scotland: NHS 24 - 08454 24 24 24  
 In N Ireland: Contact your local GP or pharmacist during normal hours; click here ([www.gpoutofhours.hscni.net/](http://www.gpoutofhours.hscni.net/)) for GP services Out-of-Hours.

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

**Product definition** Mono-constituent substance

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

**2.2 Label elements****Hazard pictograms**

**Signal word** No signal word.

**Hazard statements** No known significant effects or critical hazards.

**Precautionary statements**

**Prevention** Not applicable.

**Response** Not applicable.

**Storage** Not applicable.

**Disposal** Not applicable.

**Supplemental label elements** Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Not applicable.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** Not applicable.

**Tactile warning of danger** Not applicable.

**2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

PBT	P	B	T	vPvB	vP	vB
<input checked="" type="checkbox"/> N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Other hazards which do not result in classification** None known.

**SECTION 3: Composition/information on ingredients****3.1 Substances** Mono-constituent substance

Product/ingredient name	Identifiers	%	Classification	
			Regulation (EC) No. 1272/2008 [CLP]	Type
<input checked="" type="checkbox"/> Water	REACH #: Annex IV EC: 231-791-2 CAS: 7732-18-5	100	Not classified.	[A]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.



**Type**

- [A] Constituent  
 [B] Impurity  
 [C] Stabilising additive

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

<b>Eye contact</b>	No special recommendations.
<b>Inhalation</b>	No special recommendations.
<b>Skin contact</b>	No special recommendations.
<b>Ingestion</b>	No special recommendations.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Over-exposure signs/symptoms**

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

<b>Notes to physician</b>	No specific treatment.
<b>Specific treatments</b>	No specific treatment.

See toxicological information (Section 11)

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

**Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** None known.

**5.2 Special hazards arising from the substance or mixture**

**Hazards from the substance or mixture** In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** No specific data.

**5.3 Advice for firefighters**

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

**Small spill** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.





<b>Large spill</b>	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.
<b>6.4 Reference to other sections</b>	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

<b>Protective measures</b>	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

<b>Recommendations</b>	Analytical chemistry. Laboratory chemicals. Scientific research and development.
<b>Industrial sector specific solutions</b>	Not available.

## SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### **Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DELs available.

#### PNECs

No PECs available.

### 8.2 Exposure controls

<b>Appropriate engineering controls</b>	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
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#### Individual protection measures

##### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

##### **Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection



<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
<b>Body protection</b>	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Other skin protection</b>	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
<b>Environmental exposure controls</b>	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	0°C
<b>Initial boiling point and boiling range</b>	100°C
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	1
<b>Solubility(ies)</b>	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

### 9.2 Other information

<b>Burning time</b>	Not applicable.
<b>Burning rate</b>	Not applicable.
<b>Solubility in water</b>	Not available.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	No specific data.
<b>10.5 Incompatible materials</b>	No specific data.
<b>10.6 Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.



## SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

**Acute toxicity**

<b>Conclusion/Summary</b>	Not available.
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N/A

**Irritation/Corrosion**

<b>Conclusion/Summary</b>	Not available.
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**Sensitisation**

<b>Conclusion/Summary</b>	Not available.
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**Mutagenicity**

<b>Conclusion/Summary</b>	Not available.
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**Carcinogenicity**

<b>Conclusion/Summary</b>	Not available.
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**Reproductive toxicity**

<b>Conclusion/Summary</b>	Not available.
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**Teratogenicity**

<b>Conclusion/Summary</b>	Not available.
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**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

<b>Information on likely routes of exposure</b>	Routes of entry anticipated: Oral, Dermal, Inhalation.
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**Potential acute health effects**

<b>Inhalation</b>	No known significant effects or critical hazards.
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<b>Ingestion</b>	No known significant effects or critical hazards.
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<b>Skin contact</b>	No known significant effects or critical hazards.
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<b>Eye contact</b>	No known significant effects or critical hazards.
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**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Inhalation</b>	No specific data.
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<b>Ingestion</b>	No specific data.
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<b>Skin contact</b>	No specific data.
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<b>Eye contact</b>	No specific data.
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**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure**

<b>Potential immediate effects</b>	Not available.
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<b>Potential delayed effects</b>	Not available.
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**Long term exposure**

<b>Potential immediate effects</b>	Not available.
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<b>Potential delayed effects</b>	Not available.
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**Potential chronic health effects**

Not available.

<b>Conclusion/Summary</b>	Not available.
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<b>General</b>	No known significant effects or critical hazards.
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<b>Carcinogenicity</b>	No known significant effects or critical hazards.
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<b>Mutagenicity</b>	No known significant effects or critical hazards.
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<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary** Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Water	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Water	-1.38	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Not available.

### 12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Water- NIF107 - GROUP	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**12.6 Other adverse effects** No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-



<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-

**14.6 Special precautions for user**      **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**      Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### **Annex XIV**

None of the components are listed.

###### **Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**      Not applicable.

##### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air**      Not listed

**Industrial emissions (integrated pollution prevention and control) - Water**      Not listed

##### Ozone depleting substances (1005/2009/EU)

Not listed.

##### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

##### Seveso Directive

This product is not controlled under the Seveso Directive.

##### International regulations

###### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

###### Montreal Protocol (Annexes A, B, C, E)

Not listed.

###### Stockholm Convention on Persistent Organic Pollutants

Not listed.

###### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

###### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

##### Inventory list

**Europe**      All components are listed or exempted.

**United States**      All components are listed or exempted.

**Canada inventory**      All components are listed or exempted.

**China**      All components are listed or exempted.

**Japan**      **Japan inventory (ENCS):** All components are listed or exempted.  
**Japan inventory (ISHL):** Not determined.



**15.2 Chemical safety assessment**

This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms**

ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements** Not applicable.

**Full text of classifications [CLP/GHS]** Not applicable.

**Date of printing** 28 April 2021

**Date of issue/ Date of revision** 28 April 2021

**Date of previous issue** 17 December 2019

**Version** 10

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.




# SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name	<b>Hybridization Buffer; part of 'AlkPhos Direct™ Labelling Module, For 2500 cm<sup>2</sup> membrane'</b>	
Catalogue Number	RPN3680	 9 0 R P N 3 6 8 0
Component Number	NIF1550	
Product description	Not available.	
Product type	Liquid.	
Other means of identification	Not available.	

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Analytical chemistry.  
Laboratory chemicals  
Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 0800 515 313	<b>Hours of operation</b> 08.30 - 17.00
	<b>Person who prepared the MSDS :</b> sds_author@cytiva.com	

<b>United Kingdom (UK)</b>	Cytiva UK Amersham Place Little Chalfont Buckinghamshire HP7 9NA t: 0870 606 1921	<b>1.4 Emergency telephone number</b> Call INFOTRAC 24 Hour number: 001-352-323-3500 (Call Collect).
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### National advisory body/Poison Centre

**United Kingdom (UK)** Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE [www.toxbase.org](http://www.toxbase.org) .

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:  
In England and Wales: NHS Direct - 0845 4647 or 111  
In Scotland: NHS 24 - 08454 24 24 24  
In N Ireland: Contact your local GP or pharmacist during normal hours; click here ([www.gpoutofhours.hscni.net/](http://www.gpoutofhours.hscni.net/)) for GP services Out-of-Hours.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** Mixture

#### **Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** 17 percent of the mixture consists of component(s) of unknown acute dermal toxicity  
17 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

**Ingredients of unknown ecotoxicity** Contains 5 % of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### **Hazard pictograms**

**Signal word** No signal word.

**Hazard statements** No known significant effects or critical hazards.

#### **Precautionary statements**

**Prevention** Not applicable.

**Response** Not applicable.

**Storage** Not applicable.

**Disposal** Not applicable.

#### **Hazardous ingredients**

**Supplemental label elements** Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Not applicable.

#### **Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** Not applicable.

**Tactile warning of danger** Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

#### **Type**

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy





## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
<b>Skin contact</b>	Wash with soap and water. Get medical attention if irritation develops.
<b>Ingestion</b>	Do not ingest. Get medical attention if symptoms appear.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Specific treatments</b>	No specific treatment.

See toxicological information (Section 11)

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
metal oxide/oxides

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**Small spill** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.



<b>Large spill</b>	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.
<b>6.4 Reference to other sections</b>	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

<b>Protective measures</b>	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

<b>Recommendations</b>	Analytical chemistry. Laboratory chemicals. Scientific research and development.
<b>Industrial sector specific solutions</b>	Not available.

## SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### **Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DELs available.

#### PNECs

No PECs available.

### 8.2 Exposure controls

<b>Appropriate engineering controls</b>	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
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#### Individual protection measures

##### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

##### **Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection



<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
<b>Body protection</b>	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Other skin protection</b>	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	A respirator is not needed under normal and intended conditions of product use.
<b>Environmental exposure controls</b>	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	Liquid.
<b>Colour</b>	Yellowish.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not considered to be a product presenting a risk of explosion.
<b>Oxidising properties</b>	Not available.

### 9.2 Other information

<b>Burning time</b>	Not applicable.
<b>Burning rate</b>	Not applicable.
<b>Solubility in water</b>	Not available.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	No specific data.
<b>10.5 Incompatible materials</b>	No specific data.
<b>10.6 Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.



## SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

**Acute toxicity**

<b>Conclusion/Summary</b>	Not available.
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**Acute toxicity estimates**

N/A

**Irritation/Corrosion**

<b>Conclusion/Summary</b>	Not available.
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**Sensitisation**

<b>Conclusion/Summary</b>	Not available.
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**Mutagenicity**

<b>Conclusion/Summary</b>	Not available.
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**Carcinogenicity**

<b>Conclusion/Summary</b>	Not available.
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**Reproductive toxicity**

<b>Conclusion/Summary</b>	Not available.
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**Teratogenicity**

<b>Conclusion/Summary</b>	Not available.
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**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

<b>Information on likely routes of exposure</b>	Routes of entry anticipated: Oral, Dermal, Inhalation.
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**Potential acute health effects**

<b>Inhalation</b>	No known significant effects or critical hazards.
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<b>Ingestion</b>	No known significant effects or critical hazards.
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<b>Skin contact</b>	No known significant effects or critical hazards.
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<b>Eye contact</b>	No known significant effects or critical hazards.
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**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Inhalation</b>	No specific data.
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<b>Ingestion</b>	No specific data.
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<b>Skin contact</b>	No specific data.
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<b>Eye contact</b>	No specific data.
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**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure**

<b>Potential immediate effects</b>	Not available.
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<b>Potential delayed effects</b>	Not available.
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**Long term exposure**

<b>Potential immediate effects</b>	Not available.
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<b>Potential delayed effects</b>	Not available.
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**Potential chronic health effects**

Not available.

<b>Conclusion/Summary</b>	Not available.
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<b>General</b>	No known significant effects or critical hazards.
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<b>Carcinogenicity</b>	No known significant effects or critical hazards.
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<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary** Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** Not known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-



**14.6 Special precautions for user**      **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**      Not available.

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## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### **Annex XIV**

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**      Not applicable.

#### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air**      Not listed

**Industrial emissions (integrated pollution prevention and control) - Water**      Not listed

#### Ozone depleting substances (1005/2009/EU)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

#### International regulations

##### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

##### Montreal Protocol (Annexes A, B, C, E)

Not listed.

##### Stockholm Convention on Persistent Organic Pollutants

Not listed.

##### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

##### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

#### Inventory list

**Europe**      Not determined.

**United States**      All components are listed or exempted.

**Canada inventory**      All components are listed or exempted.

**China**      All components are listed or exempted.

**Japan**      **Japan inventory (ENCS):** All components are listed or exempted.  
**Japan inventory (ISHL):** Not determined.

**15.2 Chemical safety assessment**      This product contains substances for which Chemical Safety Assessments are still required.

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**SECTION 16: Other information**

 Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
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**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements** Not applicable.

**Full text of classifications [CLP/ GHS]** Not applicable.

**Date of printing** 28 April 2021

**Date of issue/ Date of revision** 28 April 2021

**Date of previous issue** 17 December 2019

**Version** 10

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



# SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name	<b>Alkaline Phosphatase Labelling Buffer; part of 'AlkPhos Direct™ Labelling module, For 2,500 cm<sup>2</sup> membrane'</b>	
Catalogue Number	RPN3680	 9 0 R P N 3 6 8 0
Component Number	NIF1548	
Product description	Not available.	
Product type	Liquid.	
Other means of identification	Not available.	

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Analytical chemistry.  
 Laboratory chemicals  
 Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 0800 515 313	<b>Hours of operation</b> 08.30 - 17.00
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**Person who prepared the MSDS :** sds\_author@cytiva.com

<b>United Kingdom (UK)</b>	Cytiva UK Amersham Place Little Chalfont Buckinghamshire HP7 9NA t: 0870 606 1921	<b>1.4 Emergency telephone number</b> Call INFOTRAC 24 Hour number: 001-352-323-3500 (Call Collect).
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### National advisory body/Poison Centre

**United Kingdom (UK)** Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE [www.toxbase.org](http://www.toxbase.org) .

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:  
In England and Wales: NHS Direct - 0845 4647 or 111  
In Scotland: NHS 24 - 08454 24 24 24  
In N Ireland: Contact your local GP or pharmacist during normal hours; click here ([www.gpoutofhours.hscni.net/](http://www.gpoutofhours.hscni.net/) ) for GP services Out-of-Hours.



## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** Not applicable.

**Ingredients of unknown ecotoxicity** Not applicable.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms**

**Signal word** No signal word.

**Hazard statements** No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** Not applicable.

**Response** Not applicable.

**Storage** Not applicable.

**Disposal** Not applicable.

**Hazardous ingredients**

**Supplemental label elements** Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Not applicable.

#### Special packaging requirements

**Containers to be fitted with child-resistant fastenings** Not applicable.

**Tactile warning of danger** Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures Mixture

Product/ingredient name	Identifiers	%	Classification	
			Regulation (EC) No. 1272/2008 [CLP]	Type
Poly(oxy-1,2-ethanediyl), α-[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	CAS: 9002-93-1	0.1	Acute Tox. 4, H302 Eye Dam. 1, H318 Aquatic Chronic 2, H411  See Section 16 for the full text of the H statements declared above.	[1] [5]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.



**Type**

- [1] Substance classified with a physical, health or environmental hazard  
 [2] Substance with a workplace exposure limit  
 [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII  
 [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII  
 [5] Substance of equivalent concern  
 [6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Over-exposure signs/symptoms**

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

<b>Notes to physician</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	No specific treatment.

See toxicological information (Section 11)

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

**Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** None known.

**5.2 Special hazards arising from the substance or mixture**

**Hazards from the substance or mixture** In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** No specific data.

**5.3 Advice for firefighters**

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.



## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**Small spill** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

**Protective measures** Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

**Recommendations** Analytical chemistry. Laboratory chemicals. Scientific research and development.

**Industrial sector specific solutions** Not available.

## SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DELs available.

#### PNECs



No PECs available.

## 8.2 Exposure controls

**Appropriate engineering controls** Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### Individual protection measures

**Hygiene measures** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection

**Hand protection** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/ water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

### 9.2 Other information

<b>Burning time</b>	Not applicable.
<b>Burning rate</b>	Not applicable.



<b>Solubility in water</b>	Not available.
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**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	No specific data.
<b>10.5 Incompatible materials</b>	No specific data.
<b>10.6 Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Poly(oxy-1,2-ethanediyl), α-[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	LD50 Dermal	Rabbit	8000 mg/kg	-
	LD50 Oral	Rat	1800 mg/kg	-

**Conclusion/Summary** Not available.

**Acute toxicity estimates**

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Alkaline Phosphatase Labelling Buffer - NIF1548 - GROUP	27000	20000	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), α-[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	1800	8000	N/A	N/A	N/A

**Irritation/Corrosion**

**Conclusion/Summary** Not available.

**Sensitisation**

**Conclusion/Summary** Not available.

**Mutagenicity**

**Conclusion/Summary** Not available.

**Carcinogenicity**

**Conclusion/Summary** Not available.

**Reproductive toxicity**

**Conclusion/Summary** Not available.

**Teratogenicity**

**Conclusion/Summary** Not available.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on likely routes of exposure** Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

**Inhalation** No known significant effects or critical hazards.

**Ingestion** No known significant effects or critical hazards.

**Skin contact** No known significant effects or critical hazards.

**Eye contact** No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Inhalation</b>	No specific data.
<b>Ingestion</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Eye contact</b>	No specific data.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure**

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

**Long term exposure**

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

**Potential chronic health effects**

Not available.

**Conclusion/Summary** Not available.

**General** No known significant effects or critical hazards.

**Carcinogenicity** No known significant effects or critical hazards.

**Mutagenicity** No known significant effects or critical hazards.

**Teratogenicity** No known significant effects or critical hazards.

**Developmental effects** No known significant effects or critical hazards.

**Fertility effects** No known significant effects or critical hazards.

**Other information** Not available.

**SECTION 12: Ecological information****12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
Poly(oxy-1,2-ethanediyl), α-[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours

**Conclusion/Summary** Not available.

**12.2 Persistence and degradability**

**Conclusion/Summary** Not available.

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Not available.

**12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**13.1 Waste treatment methods****Product**

<b>Methods of disposal</b>	The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
<b>Hazardous waste</b>	Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.
<b>Packaging</b>	
<b>Methods of disposal</b>	The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
<b>Special precautions</b>	This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-

**14.6 Special precautions for user**      **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**      Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

#### Annex XIV - List of substances subject to authorisation

##### Annex XIV

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
4-(1,1,3,3-Tetramethylbutyl) phenol, ethoxylated (covering well-defined substances and UVCB substances, polymers and homologues)	Substance of equivalent concern for environment	Listed	42	7/3/2017

#### Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]; 4-tert-octylphenol ethoxylates	Substance of equivalent concern for environment	Recommended	ED/169/2012	12/19/2012

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**      Not applicable.

#### Other EU regulations



**Industrial emissions (integrated pollution prevention and control) - Air** Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** Not listed

**Ozone depleting substances (1005/2009/EU)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol (Annexes A, B, C, E)**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

**Europe** Not determined.  
**United States** All components are listed or exempted.  
**Canada inventory** All components are listed or exempted.  
**China** All components are listed or exempted.  
**Japan** **Japan inventory (ENCS):** Not determined.  
**Japan inventory (ISHL):** Not determined.

**15.2 Chemical safety assessment**

This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

▀ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms**

ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements**  
 H302 Harmful if swallowed.  
 H318 Causes serious eye damage.  
 H411 Toxic to aquatic life with long lasting effects.

**Full text of classifications [CLP/GHS]**  
 Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4  
 Aquatic Chronic 2, H411 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2  
 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1

**Date of printing** 28 April 2021

**Date of issue/ Date of revision** 28 April 2021





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**Date of previous issue** 17 December 2019

**Version** 10

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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# SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name	<b>Blocking Agent; part of 'AlkPhos Direct™ Labelling module, For 2,500 cm<sup>2</sup> membrane'</b>	
Catalogue Number	RPN3680	 9 0 R P N 3 6 8 0
Component Number	NIP552	
Product description	Not available.	
Product type	Solid.	
Other means of identification	Not available.	

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Analytical chemistry.  
Laboratory chemicals  
Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 0800 515 313	<b>Hours of operation</b> 08.30 - 17.00
	<b>Person who prepared the MSDS :</b> sds_author@cytiva.com	

<b>United Kingdom (UK)</b>	Cytiva UK Amersham Place Little Chalfont Buckinghamshire HP7 9NA t: 0870 606 1921	<b>1.4 Emergency telephone number</b> Call INFOTRAC 24 Hour number: 001-352-323-3500 (Call Collect).
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### National advisory body/Poison Centre

**United Kingdom (UK)** Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE [www.toxbase.org](http://www.toxbase.org) .

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:  
In England and Wales: NHS Direct - 0845 4647 or 111  
In Scotland: NHS 24 - 08454 24 24 24  
In N Ireland: Contact your local GP or pharmacist during normal hours; click here ([www.gpoutofhours.hscni.net/](http://www.gpoutofhours.hscni.net/)) for GP services Out-of-Hours.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** 100 percent of the mixture consists of component(s) of unknown acute oral toxicity  
100 percent of the mixture consists of component(s) of unknown acute dermal toxicity  
100 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

**Ingredients of unknown ecotoxicity** Contains 100 % of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### **Hazard pictograms**

**Signal word** No signal word.

**Hazard statements** No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** Not applicable.

**Response** Not applicable.

**Storage** Not applicable.

**Disposal** Not applicable.

#### **Hazardous ingredients**

**Supplemental label elements** Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Not applicable.

#### Special packaging requirements

**Containers to be fitted with child-resistant fastenings** Not applicable.

**Tactile warning of danger** Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

#### **Type**

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy



## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	No specific treatment.

See toxicological information (Section 11)

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** No specific fire or explosion hazard.

**Hazardous combustion products** No specific data.

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**Small spill** Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

**Large spill** Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.



<b>6.4 Reference to other sections</b>	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
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## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

<b>Protective measures</b>	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

<b>Recommendations</b>	Analytical chemistry. Laboratory chemicals. Scientific research and development.
<b>Industrial sector specific solutions</b>	Not available.

## SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### **Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DELs available.

#### PNECs

No PECs available.

### 8.2 Exposure controls

<b>Appropriate engineering controls</b>	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
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#### Individual protection measures

<b>Hygiene measures</b>	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Eye/face protection</b>	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
<b>Skin protection</b>	
<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
<b>Body protection</b>	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.



<b>Other skin protection</b>	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
<b>Environmental exposure controls</b>	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	Solid.
<b>Colour</b>	White.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	[Product does not sustain combustion.]
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Not available.
<b>Partition coefficient: n-octanol/ water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

### 9.2 Other information

<b>Burning time</b>	Not available.
<b>Burning rate</b>	Not available.
<b>Solubility in water</b>	Not available.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	No specific data.
<b>10.5 Incompatible materials</b>	No specific data.
<b>10.6 Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.



## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Conclusion/Summary Not available.

#### Acute toxicity estimates

N/A

#### Irritation/Corrosion

Conclusion/Summary Not available.

#### Sensitisation

Conclusion/Summary Not available.

#### Mutagenicity

Conclusion/Summary Not available.

#### Carcinogenicity

Conclusion/Summary Not available.

#### Reproductive toxicity

Conclusion/Summary Not available.

#### Teratogenicity

Conclusion/Summary Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

**Information on likely routes of exposure** Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

**Inhalation** No known significant effects or critical hazards.

**Ingestion** No known significant effects or critical hazards.

**Skin contact** No known significant effects or critical hazards.

**Eye contact** No known significant effects or critical hazards.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Inhalation** No specific data.

**Ingestion** No specific data.

**Skin contact** No specific data.

**Eye contact** No specific data.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

##### Short term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

##### Long term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

#### Potential chronic health effects

Not available.

**Conclusion/Summary** Not available.

**General** No known significant effects or critical hazards.

**Carcinogenicity** No known significant effects or critical hazards.



<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary** Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** Not known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-





**14.6 Special precautions for user**      **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**      Not available.

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## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### **Annex XIV**

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**      Not applicable.

#### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air**      Not listed

**Industrial emissions (integrated pollution prevention and control) - Water**      Not listed

#### Ozone depleting substances (1005/2009/EU)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

#### International regulations

##### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

##### Montreal Protocol (Annexes A, B, C, E)

Not listed.

##### Stockholm Convention on Persistent Organic Pollutants

Not listed.

##### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

##### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

#### Inventory list

**Europe**      Not determined.

**United States**      Not determined.

**Canada inventory**      Not determined.

**China**      Not determined.

**Japan**      **Japan inventory (ENCS):** Not determined.  
**Japan inventory (ISHL):** Not determined.

**15.2 Chemical safety assessment**      This product contains substances for which Chemical Safety Assessments are still required.

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## SECTION 16: Other information

 Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
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**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements** Not applicable.

**Full text of classifications [CLP/ GHS]** Not applicable.

**Date of printing** 28 April 2021

**Date of issue/ Date of revision** 28 April 2021

**Date of previous issue** 17 December 2019

**Version** 10

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.




# SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name	<b>Reaction Buffer; part of 'AlkPhos Direct™ Labelling module, For 2,500 cm<sup>2</sup> membrane'</b>	
Catalogue Number	RPN3680	 9 0 R P N 3 6 8 0
Component Number	NIF1551	
Product description	Not available.	
Product type	Liquid.	
Other means of identification	Not available.	

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Analytical chemistry.  
Laboratory chemicals  
Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 0800 515 313	<b>Hours of operation</b> 08.30 - 17.00
	<b>Person who prepared the MSDS :</b> sds_author@cytiva.com	

<b>United Kingdom (UK)</b>	Cytiva UK Amersham Place Little Chalfont Buckinghamshire HP7 9NA t: 0870 606 1921	<b>1.4 Emergency telephone number</b> Call INFOTRAC 24 Hour number: 001-352-323-3500 (Call Collect).
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### National advisory body/Poison Centre

**United Kingdom (UK)** Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE [www.toxbase.org](http://www.toxbase.org) .

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:  
In England and Wales: NHS Direct - 0845 4647 or 111  
In Scotland: NHS 24 - 08454 24 24 24  
In N Ireland: Contact your local GP or pharmacist during normal hours; click here ([www.gpoutofhours.hscni.net/](http://www.gpoutofhours.hscni.net/)) for GP services Out-of-Hours.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** Mixture

#### **Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** Not applicable.

**Ingredients of unknown ecotoxicity** Not applicable.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### **Hazard pictograms**

**Signal word** No signal word.

**Hazard statements** No known significant effects or critical hazards.

#### **Precautionary statements**

**Prevention** Not applicable.

**Response** Not applicable.

**Storage** Not applicable.

**Disposal** Not applicable.

#### **Hazardous ingredients**

**Supplemental label elements** Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Not applicable.

#### **Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** Not applicable.

**Tactile warning of danger** Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** None known.

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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

#### **Type**

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Ingestion</b>	No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	No specific treatment.

See toxicological information (Section 11)

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** None known.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** No specific data.

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

**Small spill** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.



<b>Large spill</b>	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.
<b>6.4 Reference to other sections</b>	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

<b>Protective measures</b>	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

<b>Recommendations</b>	Analytical chemistry. Laboratory chemicals. Scientific research and development.
<b>Industrial sector specific solutions</b>	Not available.

## SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### **Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DELs available.

#### PNECs

No PECs available.

### 8.2 Exposure controls

<b>Appropriate engineering controls</b>	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
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#### Individual protection measures

##### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

##### **Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection



<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
<b>Body protection</b>	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Other skin protection</b>	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
<b>Environmental exposure controls</b>	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

### 9.2 Other information

<b>Burning time</b>	Not applicable.
<b>Burning rate</b>	Not applicable.
<b>Solubility in water</b>	Not available.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	No specific data.
<b>10.5 Incompatible materials</b>	No specific data.
<b>10.6 Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.



## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Conclusion/Summary Not available.

#### Acute toxicity estimates

N/A

#### Irritation/Corrosion

Conclusion/Summary Not available.

#### Sensitisation

Conclusion/Summary Not available.

#### Mutagenicity

Conclusion/Summary Not available.

#### Carcinogenicity

Conclusion/Summary Not available.

#### Reproductive toxicity

Conclusion/Summary Not available.

#### Teratogenicity

Conclusion/Summary Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

**Information on likely routes of exposure** Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

**Inhalation** No known significant effects or critical hazards.

**Ingestion** No known significant effects or critical hazards.

**Skin contact** No known significant effects or critical hazards.

**Eye contact** No known significant effects or critical hazards.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Inhalation** No specific data.

**Ingestion** No specific data.

**Skin contact** No specific data.

**Eye contact** No specific data.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

##### Short term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

##### Long term exposure

**Potential immediate effects** Not available.

**Potential delayed effects** Not available.

#### Potential chronic health effects

Not available.

**Conclusion/Summary** Not available.

**General** No known significant effects or critical hazards.

**Carcinogenicity** No known significant effects or critical hazards.





<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary** Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** Not known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-



**14.6 Special precautions for user**      **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**      Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### **Annex XIV**

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**      Not applicable.

#### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air**      Not listed

**Industrial emissions (integrated pollution prevention and control) - Water**      Not listed

#### Ozone depleting substances (1005/2009/EU)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

#### International regulations

##### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

##### Montreal Protocol (Annexes A, B, C, E)

Not listed.

##### Stockholm Convention on Persistent Organic Pollutants

Not listed.

##### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

##### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

#### Inventory list

<b>Europe</b>	All components are listed or exempted.
<b>United States</b>	All components are listed or exempted.
<b>Canada inventory</b>	All components are listed or exempted.
<b>China</b>	All components are listed or exempted.
<b>Japan</b>	<b>Japan inventory (ENCS):</b> Not determined. <b>Japan inventory (ISHL):</b> Not determined.

**15.2 Chemical safety assessment**      This product contains substances for which Chemical Safety Assessments are still required.



## SECTION 16: Other information

Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
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**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Not classified.	

**Full text of abbreviated H statements** Not applicable.

**Full text of classifications [CLP/ GHS]** Not applicable.

**Date of printing** 28 April 2021

**Date of issue/ Date of revision** 28 April 2021

**Date of previous issue** 17 December 2019

**Version** 10

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.




# SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name	<b>Cross-linker; part of 'AlkPhos Direct™ Labelling module, For 2,500 cm<sup>2</sup> membrane'</b>
Catalogue Number	RPN3680  9 0 R P N 3 6 8 0
Component Number	NIF1348
Product description	Not available.
Product type	Liquid.
Other means of identification	Not available.

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Analytical chemistry.  
Laboratory chemicals  
Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 0800 515 313	<b>Hours of operation</b> 08.30 - 17.00
	<b>Person who prepared the MSDS :</b> sds_author@cytiva.com	

<b>United Kingdom (UK)</b>	Cytiva UK Amersham Place Little Chalfont Buckinghamshire HP7 9NA t: 0870 606 1921	<b>1.4 Emergency telephone number</b> Call INFOTRAC 24 Hour number: 001-352-323-3500 (Call Collect).
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### National advisory body/Poison Centre

**United Kingdom (UK)** Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE [www.toxbase.org](http://www.toxbase.org) .

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:  
In England and Wales: NHS Direct - 0845 4647 or 111  
In Scotland: NHS 24 - 08454 24 24 24  
In N Ireland: Contact your local GP or pharmacist during normal hours; click here ([www.gpoutofhours.hscni.net/](http://www.gpoutofhours.hscni.net/)) for GP services Out-of-Hours.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226  
Acute Tox. 4, H302  
Skin Sens. 1, H317  
Muta. 2, H341  
Carc. 1B, H350  
STOT SE 1, H370

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** Not applicable.

**Ingredients of unknown ecotoxicity** Not applicable.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### Hazard pictograms



**Signal word** Danger

**Hazard statements** Flammable liquid and vapour.  
Harmful if swallowed.  
May cause an allergic skin reaction.  
May cause cancer.  
Suspected of causing genetic defects.  
Causes damage to organs.

#### Precautionary statements

**Prevention** Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapour.

**Response** F ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

**Storage** Store locked up.

**Disposal** Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** Methanol  
formaldehyde

**Supplemental label elements** Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Restricted to professional users.

#### Special packaging requirements

**Containers to be fitted with child-resistant fastenings** Not applicable.

**Tactile warning of danger** Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** None known.

## SECTION 3: Composition/information on ingredients

## 3.2 Mixtures

Mixture

Product/ingredient name	Identifiers	%	Classification	
			Regulation (EC) No. 1272/2008 [CLP]	Type
methanol	REACH #: 01-2119433307-44 EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	10	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370	[1] [2]
formaldehyde	REACH #: 01-2119488953-20 EC: 200-001-8 CAS: 50-00-0 Index: 605-001-00-5	4 - 5	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1B, H314 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335  See Section 16 for the full text of the H statements declared above.	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

**Type**

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

## 4.1 Description of first aid measures

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Skin contact</b>	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

## 4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	No specific data.



**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** No specific treatment.

See toxicological information (Section 11)

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

**Suitable extinguishing media** Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** Do not use water jet.

**5.2 Special hazards arising from the substance or mixture**

**Hazards from the substance or mixture** **F** Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

**Hazardous combustion products** Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**5.3 Advice for firefighters**

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

**Small spill** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

**6.4 Reference to other sections**

See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**7.1 Precautions for safe handling**

**Protective measures**

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**Seveso Directive - Reporting thresholds (in tonnes)****Danger criteria**

Category	Notification and MAPP threshold	Safety report threshold
H3	50	200
P5c	5000	50000

**7.3 Specific end use(s)****Recommendations**

Analytical chemistry. Laboratory chemicals. Scientific research and development.

**Industrial sector specific solutions**

Not available.

**SECTION 8: Exposure controls/personal protection**

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario (s).

**8.1 Control parameters****Occupational exposure limits**

Product/ingredient name	Exposure limit values
methanol	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). Absorbed through skin.</b> STEL: 333 mg/m <sup>3</sup> 15 minutes. STEL: 250 ppm 15 minutes. TWA: 266 mg/m <sup>3</sup> 8 hours. TWA: 200 ppm 8 hours.
formaldehyde	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018).</b> STEL: 2.5 mg/m <sup>3</sup> 15 minutes. STEL: 2 ppm 15 minutes. TWA: 2.5 mg/m <sup>3</sup> 8 hours. TWA: 2 ppm 8 hours.

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**



Product/ingredient name	Type	Exposure	Value	Population	Effects	
methanol	DNEL	Short term Dermal	8 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	8 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Dermal	40 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	50 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	50 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	50 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	50 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	260 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Inhalation	260 mg/m <sup>3</sup>	Workers	Systemic	
	formaldehyde	DNEL	Long term Inhalation	0.1 mg/m <sup>3</sup>	General population	Local
		DNEL	Long term Inhalation	0.5 mg/m <sup>3</sup>	Workers	Local
DNEL		Short term Inhalation	1 mg/m <sup>3</sup>	Workers	Local	
DNEL		Long term Inhalation	3.2 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Oral	4.1 mg/kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	9 mg/m <sup>3</sup>	Workers	Systemic	
DNEL		Long term Dermal	102 mg/kg bw/day	General population	Systemic	
DNEL		Long term Dermal	240 mg/kg bw/day	Workers	Systemic	

**PNECs**

No PECs available.

**8.2 Exposure controls****Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Individual protection measures****Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection****Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

**Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.



## SECTION 9: Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

**Appearance**

<b>Physical state</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Pungent. [Slight]
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Closed cup: 37.8 to 61°C
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Easily soluble in the following materials: cold water, hot water and methanol.
<b>Partition coefficient: n-octanol/ water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

## 9.2 Other information

<b>Burning time</b>	Not applicable.
<b>Burning rate</b>	Not applicable.
<b>Solubility in water</b>	Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** The product is stable.

**10.3 Possibility of hazardous reactions** Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**10.5 Incompatible materials** Reactive or incompatible with the following materials:  
oxidizing materials

**10.6 Hazardous decomposition products** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
formaldehyde	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
	LD50 Dermal	Rabbit	270 mg/kg	-
	LD50 Oral	Rat	100 mg/kg	-

**Conclusion/Summary** Harmful if swallowed or in contact with skin.



**Acute toxicity estimates**

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
☑ Cross-linker - NIF1348 - GROUP	706.9	2050	N/A	21.2	N/A
methanol	100	300	64000	3	N/A
formaldehyde	100	270	N/A	3	N/A

**Irritation/Corrosion**

**Conclusion/Summary** Not available.

**Sensitisation**

**Conclusion/Summary**

**Skin** May cause an allergic skin reaction.

**Mutagenicity**

**Conclusion/Summary** Suspected of causing genetic defects.

**Carcinogenicity**

**Conclusion/Summary** May cause cancer.

**Reproductive toxicity**

**Conclusion/Summary** Not available.

**Teratogenicity**

**Conclusion/Summary** Not available.

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
methanol	Category 1	Not determined	Not determined
formaldehyde	Category 3	Not applicable.	Respiratory tract irritation

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on likely routes of exposure** Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

**Inhalation** ☑ Causes damage to organs following a single exposure if inhaled.

**Ingestion** ☑ Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

**Skin contact** ☑ Causes damage to organs following a single exposure in contact with skin. May cause an allergic skin reaction.

**Eye contact** No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Inhalation** No specific data.

**Ingestion** No specific data.

**Skin contact** Adverse symptoms may include the following:  
irritation  
redness

**Eye contact** No specific data.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure**

**Potential immediate effects** Harmful if swallowed or in contact with skin.

**Potential delayed effects** Causes damage to organs.

**Long term exposure**

**Potential immediate effects** Harmful if swallowed or in contact with skin.

**Potential delayed effects** Suspected of causing genetic defects.

**Potential chronic health effects**

Not available.



<b>Conclusion/Summary</b>	Not available.
<b>General</b>	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
<b>Carcinogenicity</b>	May cause cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	Suspected of causing genetic defects.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
methanol       formaldehyde	Acute EC50 16.912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 3.48 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 3.05 mg/l Marine water	Algae - Isochrysis galbana - Exponential growth phase	96 hours
	Acute EC50 12.98 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 3.26 mg/l Fresh water	Daphnia - Daphnia magna - Embryo	48 hours
	Acute LC50 1.41 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Chronic NOEC 1.56 mg/l Fresh water	Fish - Oreochromis niloticus - Fingerling	12 weeks	

**Conclusion/Summary** Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
methanol	Fresh water 1 to 10 days, 4 to 30°C	-	Readily
formaldehyde	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
methanol	-0.77	<10	low
formaldehyde	0.35	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

##### Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

##### Hazardous waste





The classification of the product may meet the criteria for a hazardous waste.

#### Packaging



<b>Methods of disposal</b>	The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
<b>Special precautions</b>	This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	UN1987	UN1987	UN1987	UN1987
<b>14.2 UN proper shipping name</b>	ALCOHOLS, N.O.S. (methanol, mixture)	ALCOHOLS, N.O.S. (methanol, mixture)	ALCOHOLS, N.O.S. (methanol, mixture)	ALCOHOLS, N.O.S. (methanol, mixture)
<b>14.3 Transport hazard class(es)</b>	3 	3 	3 	3 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-

**14.6 Special precautions for user**      **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**      Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### **Annex XIV**

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**      Restricted to professional users.

##### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air**      Not listed

**Industrial emissions (integrated pollution prevention and control) - Water**      Not listed

##### Ozone depleting substances (1005/2009/EU)

Not listed.

##### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

##### Seveso Directive

This product is controlled under the Seveso Directive.



**Danger criteria****Category**

3  
P5c

**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol (Annexes A, B, C, E)**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

<b>Europe</b>	All components are listed or exempted.
<b>United States</b>	All components are listed or exempted.
<b>Canada inventory</b>	All components are listed or exempted.
<b>China</b>	All components are listed or exempted.
<b>Japan</b>	<b>Japan inventory (ENCS):</b> All components are listed or exempted. <b>Japan inventory (ISHL):</b> Not determined.

**15.2 Chemical safety assessment**

This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms**

ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 1, H370	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method

**Full text of abbreviated H statements**

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.

**Full text of classifications [CLP/GHS]**

Acute Tox. 3, H301	ACUTE TOXICITY (oral) - Category 3
Acute Tox. 3, H311	ACUTE TOXICITY (dermal) - Category 3
Acute Tox. 3, H331	ACUTE TOXICITY (inhalation) - Category 3
Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
Carc. 1B, H350	CARCINOGENICITY - Category 1B
Flam. Liq. 2, H225	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Muta. 2, H341	GERM CELL MUTAGENICITY - Category 2
Skin Corr. 1B, H314	SKIN CORROSION/IRRITATION - Category 1B



Skin Sens. 1, H317	SKIN SENSITISATION - Category 1
STOT SE 1, H370	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

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**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.




# SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - United Kingdom (UK)

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name	<b>AlkPhos Direct™ Labelling module, For 2,500 cm<sup>2</sup> membrane</b>	
Catalogue Number	RPN3680	 9 0 R P N 3 6 8 0
Product description	Not available.	
Product type	Liquid.	
Other means of identification	Not available.	

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Analytical chemistry.  
Laboratory chemicals  
Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Cytiva Amersham Place Little Chalfont Buckinghamshire HP7 9NA United Kingdom +44 0800 515 313	<b>Hours of operation</b> 08.30 - 17.00
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**Person who prepared the MSDS :** sds\_author@cytiva.com

<b>United Kingdom (UK)</b>	Cytiva UK Amersham Place Little Chalfont Buckinghamshire HP7 9NA t: 0870 606 1921	<b>1.4 Emergency telephone number</b> Call INFOTRAC 24 Hour number: 001-352-323-3500 (Call Collect).
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### National advisory body/Poison Centre

**United Kingdom (UK)** Health professionals should contact the National Poisons Information Service (NPIS) by telephone, or use TOXBASE [www.toxbase.org](http://www.toxbase.org) .

NPIS <http://www.npis.org/> advise that others seeking specific information on poisons should contact:  
In England and Wales: NHS Direct - 0845 4647 or 111  
In Scotland: NHS 24 - 08454 24 24 24  
In N Ireland: Contact your local GP or pharmacist during normal hours; click here ([www.gpoutofhours.hscni.net/](http://www.gpoutofhours.hscni.net/) ) for GP services Out-of-Hours.



## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226  
Acute Tox. 4, H302  
Skin Sens. 1, H317  
Muta. 2, H341  
Carc. 1B, H350  
STOT SE 1, H370

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

**Ingredients of unknown toxicity** Not applicable.

**Ingredients of unknown ecotoxicity** Not applicable.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms**



**Signal word** Danger

**Hazard statements** Flammable liquid and vapour.  
Harmful if swallowed.  
May cause an allergic skin reaction.  
May cause cancer.  
Suspected of causing genetic defects.  
Causes damage to organs.

#### Precautionary statements

**Prevention** Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapour.

**Response** F ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

**Storage** Store locked up.

**Disposal** Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** Methanol  
formaldehyde

**Supplemental label elements** Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** Restricted to professional users.

#### Special packaging requirements

**Containers to be fitted with child-resistant fastenings** Not applicable.

**Tactile warning of danger** Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** None known.



## SECTION 3: Composition/information on ingredients

## 3.2 Mixtures

Mixture

Product/ingredient name	Identifiers	%	Classification	
			Regulation (EC) No. 1272/2008 [CLP]	Type
methanol	REACH #: 01-2119433307-44 EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	10	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370	[1] [2]
formaldehyde	REACH #: 01-2119488953-20 EC: 200-001-8 CAS: 50-00-0 Index: 605-001-00-5	4 - 5	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1B, H314 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335  See Section 16 for the full text of the H statements declared above.	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

**Type**

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

## 4.1 Description of first aid measures

<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Skin contact</b>	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

## 4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	No specific data.



**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** No specific treatment.

See toxicological information (Section 11)

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

**Suitable extinguishing media** Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** Do not use water jet.

**5.2 Special hazards arising from the substance or mixture**

**Hazards from the substance or mixture** **F** Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

**Hazardous combustion products** Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**5.3 Advice for firefighters**

**Special precautions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up**

**Small spill** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

**6.4 Reference to other sections**

See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**7.1 Precautions for safe handling**

**Protective measures**

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**Seveso Directive - Reporting thresholds (in tonnes)****Danger criteria**

Category	Notification and MAPP threshold	Safety report threshold
H3	50	200
P5c	5000	50000

**7.3 Specific end use(s)****Recommendations**

Analytical chemistry. Laboratory chemicals. Scientific research and development.

**Industrial sector specific solutions**

Not available.

**SECTION 8: Exposure controls/personal protection**

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario (s).

**8.1 Control parameters****Occupational exposure limits**

Product/ingredient name	Exposure limit values
methanol	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). Absorbed through skin.</b> STEL: 333 mg/m <sup>3</sup> 15 minutes. STEL: 250 ppm 15 minutes. TWA: 266 mg/m <sup>3</sup> 8 hours. TWA: 200 ppm 8 hours.
formaldehyde	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018).</b> STEL: 2.5 mg/m <sup>3</sup> 15 minutes. STEL: 2 ppm 15 minutes. TWA: 2.5 mg/m <sup>3</sup> 8 hours. TWA: 2 ppm 8 hours.

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

Product/ingredient name	Type	Exposure	Value	Population	Effects	
methanol	DNEL	Short term Dermal	8 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	8 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Dermal	40 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	50 mg/m <sup>3</sup>	General population	Local	
	DNEL	Long term Inhalation	50 mg/m <sup>3</sup>	General population	Local	
	DNEL	Short term Inhalation	50 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Inhalation	50 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	260 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Inhalation	260 mg/m <sup>3</sup>	Workers	Systemic	
	formaldehyde	DNEL	Long term Inhalation	0.1 mg/m <sup>3</sup>	General population	Local
		DNEL	Long term Inhalation	0.5 mg/m <sup>3</sup>	Workers	Local
DNEL		Short term Inhalation	1 mg/m <sup>3</sup>	Workers	Local	
DNEL		Long term Inhalation	3.2 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Oral	4.1 mg/kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	9 mg/m <sup>3</sup>	Workers	Systemic	
DNEL		Long term Dermal	102 mg/kg bw/day	General population	Systemic	
DNEL		Long term Dermal	240 mg/kg bw/day	Workers	Systemic	

**PNECs**

No PECs available.

**8.2 Exposure controls****Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Individual protection measures****Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection****Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

**Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.



## SECTION 9: Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

**Appearance**

<b>Physical state</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Pungent. [Slight]
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Closed cup: 37.8 to 61°C
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Easily soluble in the following materials: cold water, hot water and methanol.
<b>Partition coefficient: n-octanol/ water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

## 9.2 Other information

<b>Burning time</b>	Not applicable.
<b>Burning rate</b>	Not applicable.
<b>Solubility in water</b>	Not available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** The product is stable.

**10.3 Possibility of hazardous reactions** Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**10.5 Incompatible materials** Reactive or incompatible with the following materials:  
oxidizing materials

**10.6 Hazardous decomposition products** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
formaldehyde	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
	LD50 Dermal	Rabbit	270 mg/kg	-
	LD50 Oral	Rat	100 mg/kg	-

**Conclusion/Summary** Harmful if swallowed or in contact with skin.



**Acute toxicity estimates**

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
☑ Cross-linker - NIF1348 - GROUP	706.9	2050	N/A	21.2	N/A
methanol	100	300	64000	3	N/A
formaldehyde	100	270	N/A	3	N/A

**Irritation/Corrosion**

**Conclusion/Summary** Not available.

**Sensitisation**

**Conclusion/Summary**

**Skin** May cause an allergic skin reaction.

**Mutagenicity**

**Conclusion/Summary** Suspected of causing genetic defects.

**Carcinogenicity**

**Conclusion/Summary** May cause cancer.

**Reproductive toxicity**

**Conclusion/Summary** Not available.

**Teratogenicity**

**Conclusion/Summary** Not available.

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
methanol	Category 1	Not determined	Not determined
formaldehyde	Category 3	Not applicable.	Respiratory tract irritation

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on likely routes of exposure** Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

**Inhalation** ☑ Causes damage to organs following a single exposure if inhaled.

**Ingestion** ☑ Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

**Skin contact** ☑ Causes damage to organs following a single exposure in contact with skin. May cause an allergic skin reaction.

**Eye contact** No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Inhalation** No specific data.

**Ingestion** No specific data.

**Skin contact** Adverse symptoms may include the following:  
irritation  
redness

**Eye contact** No specific data.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure**

**Potential immediate effects** Harmful if swallowed or in contact with skin.

**Potential delayed effects** Causes damage to organs.

**Long term exposure**

**Potential immediate effects** Harmful if swallowed or in contact with skin.

**Potential delayed effects** Suspected of causing genetic defects.

**Potential chronic health effects**

Not available.



<b>Conclusion/Summary</b>	Not available.
<b>General</b>	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
<b>Carcinogenicity</b>	May cause cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	Suspected of causing genetic defects.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
methanol       formaldehyde	Acute EC50 16.912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 3.48 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 3.05 mg/l Marine water	Algae - Isochrysis galbana - Exponential growth phase	96 hours
	Acute EC50 12.98 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 3.26 mg/l Fresh water	Daphnia - Daphnia magna - Embryo	48 hours
	Acute LC50 1.41 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Chronic NOEC 1.56 mg/l Fresh water	Fish - Oreochromis niloticus - Fingerling	12 weeks	

**Conclusion/Summary** Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
methanol	Fresh water 1 to 10 days, 4 to 30°C	-	Readily
formaldehyde	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
methanol	-0.77	<10	low
formaldehyde	0.35	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

**Mobility** Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

##### Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

##### Hazardous waste

The classification of the product may meet the criteria for a hazardous waste.





#### Packaging





<b>Methods of disposal</b>	The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
<b>Special precautions</b>	This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	UN1987	UN1987	UN1987	UN1987
<b>14.2 UN proper shipping name</b>	ALCOHOLS, N.O.S. (methanol, mixture)	ALCOHOLS, N.O.S. (methanol, mixture)	ALCOHOLS, N.O.S. (methanol, mixture)	ALCOHOLS, N.O.S. (methanol, mixture)
<b>14.3 Transport hazard class(es)</b>	3 	3 	3 	3 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-

**14.6 Special precautions for user**      **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**      Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### **Annex XIV**

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**      Restricted to professional users.

##### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air**      Not listed

**Industrial emissions (integrated pollution prevention and control) - Water**      Not listed

##### Ozone depleting substances (1005/2009/EU)

Not listed.

##### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

##### Seveso Directive

This product is controlled under the Seveso Directive.



**Danger criteria****Category**H3  
P5c**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol (Annexes A, B, C, E)**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

<b>Europe</b>	All components are listed or exempted.
<b>United States</b>	All components are listed or exempted.
<b>Canada inventory</b>	All components are listed or exempted.
<b>China</b>	All components are listed or exempted.
<b>Japan</b>	<b>Japan inventory (ENCS):</b> All components are listed or exempted. <b>Japan inventory (ISHL):</b> Not determined.

**15.2 Chemical safety assessment**

This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms**

ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 1, H370	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method

**Full text of abbreviated H statements**

H225 Highly flammable liquid and vapour.  
 H226 Flammable liquid and vapour.  
 H301 Toxic if swallowed.  
 H302 Harmful if swallowed.  
 H311 Toxic in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H331 Toxic if inhaled.  
 H335 May cause respiratory irritation.  
 H341 Suspected of causing genetic defects.  
 H350 May cause cancer.  
 H370 Causes damage to organs.

**Full text of classifications [CLP/GHS]**

Acute Tox. 3, H301 ACUTE TOXICITY (oral) - Category 3  
 Acute Tox. 3, H311 ACUTE TOXICITY (dermal) - Category 3  
 Acute Tox. 3, H331 ACUTE TOXICITY (inhalation) - Category 3  
 Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4  
 Carc. 1B, H350 CARCINOGENICITY - Category 1B  
 Flam. Liq. 2, H225 FLAMMABLE LIQUIDS - Category 2  
 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3  
 Muta. 2, H341 GERM CELL MUTAGENICITY - Category 2  
 Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B



Skin Sens. 1, H317	SKIN SENSITISATION - Category 1
STOT SE 1, H370	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

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