

06.04.2022	Kit Components	
Product code	roduct code Description	
A8088	Zellproliferations Kit XTT	
Components:		
A8088A	XTT reagent solution A	
A8088B	XTT Activator solution B	



Safety data sheet

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according to 1907/2006/EC, Article 31

Printing date 06.04.2022 Revision: 06.04.2022 Version number 3.02 (replaces version 3.01)

SECTION 1: Identification of the substance/mixture and of the comp undertaking	any/	
1.1 Product identifier		
· Trade name: XTT reagent solution A		
 Article number: A8088A Application of the substance / the mixture Biochemistry Laboratory chemicals 		
• 1.3 Details of the supplier of the safety data sheet• Manufacturer/Supplier:AppliChem GmbHTel.: +49 (0)6151Ottoweg 4Fax.: +49 (0)6151 9D-64291 Darmstadtmsds@applicher	35711	
 Further information obtainable from: Dept. Compliance 1.4 Emergency telephone number: +49(0)6151 93570 (Inside normal buisness hours) 		
SECTION 2: Hazards identification • 2.1 Classification of the substance or mixture • Classification according to Regulation (EC) No 1272/2008 The product is not classified, according to the GB CLP regulation.		
 2.2 Label elements Labelling according to Regulation (EC) No 1272/2008 Void Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. 		
· vPvB: Not applicable.		
SECTION 3: Composition/information on ingredients 3.2 Mixtures Description: aqeous solution		
SECTION 3: Composition/information on ingredients · 3.2 Mixtures · Description: aqeous solution · Dangerous components:	2.5%	

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GB

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SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· After eye contact:

Rinse opened eye for several minutes under running water.

Seek medical treatment.

• After swallowing: Rinse out mouth.

If symptoms persist consult doctor.

- 4.2 Most important symptoms and effects, both acute and delayed
- No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

• Suitable extinguishing agents: Water, CO2, foam, powder.

 5.2 Special hazards arising from the substance or mixture Formation of toxic gases is possible during heating or in case of fire. In case of fire, the following can be released: Nitrogen oxides (NOx) Carbon monoxide and carbon dioxide Sulphur oxides (SOx) Non-combustible.
 5.3 Advice for firefighters

- Protective equipment: Wear self-contained respiratory protective device.
- · Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. Contain escaping vapours with water.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Do not inhale steams/aerosols.
- 6.2 Environmental precautions: Do not allow product to reach sewage system or any water course.

• 6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Clean up affected area.

6.4 Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

SECTION 7: Handling and storage

• 7.1 Precautions for safe handling No special precautions are necessary if used correctly.

· Information about fire - and explosion protection: The product is not flammable.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

• Requirements to be met by storerooms and receptacles: No special requirements.

(Contd. on page 3)

[–] GB

Trade name: XTT reagent solution A (Contd. of page 2) · Information about storage in one common storage facility: Not required. · Further information about storage conditions: Protect from exposure to the light. Keep container sealed. · Recommended storage temperature: -20°C · Storage class: 12 · 7.3 Specific end use(s) No further relevant information available. **SECTION 8: Exposure controls/personal protection** · 8.1 Control parameters · Ingredients with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. • Additional information: The lists valid during the making were used as basis. · 8.2 Exposure controls · Appropriate engineering controls No further data; see item 7. · Individual protection measures, such as personal protective equipment General protective and hygienic measures: Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. · Respiratory protection: Use suitable respiratory protective device only when aerosol or mist is formed. Hand protection The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. · Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. • For the permanent contact gloves made of the following materials are suitable: Nitrile rubber. NBR Recommended thickness of the material: ≥ 0.11 mm Value for the permeation: Level \geq 480 min • As protection from splashes gloves made of the following materials are suitable: Nitrile rubber, NBR Recommended thickness of the material: > 0.11 mm Value for the permeation: Level \geq 480 min · Eye/face protection Safety glasses · Body protection: Protective work clothing

SECTION 9: Physical and chemical properties • 9.1 Information on basic physical and chemical properties • General Information • Physical state Fluid • Colour: Light orange colour • Odour: Characteristic • Odour threshold: Not determined.

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Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boi	-
range	Undetermined.
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Not applicable.
Decomposition temperature:	Not determined.
pH	Not determined.
Viscosity:	
Kinematic viscosity	Not determined.
Dynamic:	Not determined.
Solubility	
water:	Fully miscible.
Partition coefficient n-octanol/water (log va	
Vapour pressure at 20 °C:	23 hPa (7732-18-5 water)
Density and/or relative density	20 m a (1102 m o
	Not determined.
Density: Belative density	
Relative density	Not determined.
Vapour density	Not determined.
9.2 Other information	
Appearance:	
Form:	Fluid
Important information on protection of he	alth
and environment, and on safety.	
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard.
Solvent content:	
Water:	>98.0 %
Change in condition	- 00.0 /0
Evaporation rate	Not determined.
•	
Information with regard to physical haz	zard
classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
	Void
<i>y</i> , , ,	
Pyrophoric solids	
Pyrophoric solids Self-heating substances and mixtures	Void
Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit	Void
Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit flammable gases in contact with water	Void Void
Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit flammable gases in contact with water Oxidising liquids	Void Void Void
Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit flammable gases in contact with water Oxidising liquids Oxidising solids	Void Void Void Void
Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit flammable gases in contact with water Oxidising liquids Oxidising solids Organic peroxides	Void Void Void Void Void
Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit flammable gases in contact with water Oxidising liquids Oxidising solids	Void Void Void Void

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SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

• 10.4 Conditions to avoid No further relevant information available.

- · 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: In the event of fire: See chapter 5

· Additional information: light sensitive

SECTION 11: Toxicological information

- \cdot 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- Acute toxicity
- LD/LC50 values relevant for classification:
- Quantitative data on the toxicological effect of this product are not available.
- · Serious eye damage/irritation
- · After inhalation: No irritant effect.
- · 11.2 Information on other hazards

· Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- · 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- 12.6 Endocrine disrupting properties
- The product does not contain substances with endocrine disrupting properties.
- 12.7 Other adverse effects
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Not hazardous for water.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Chemicals must be disposed of in compliance with the respective national regulations.

- · Uncleaned packaging:
- Recommendation:

Disposal must be made according to official regulations.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

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· Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information	
 · 14.1 UN number or ID number · ADR, ADN, IMDG, IATA 	Void
 14.2 UN proper shipping name ADR, ADN, IMDG, IATA 	Void
· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA · Class	Void
 14.4 Packing group ADR, IMDG, IATA 	Void
· 14.5 Environmental hazards:	Not applicable.
 14.6 Special precautions for user 	Not applicable.
 14.7 Maritime transport in bulk according to IMO instruments Not applicable. 	
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Void

SECTION 15: Regulatory information

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

- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- · National regulations:
- · Other regulations, limitations and prohibitive regulations
- · Substances of very high concern (SVHC) according to REACH, Article 57
- None of the ingredients is listed.
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H228 Flammable solid.

H242 Heating may cause a fire.

- · Department issuing SDS: Dept. Compliance
- Abbreviations and acronyms:
 ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent

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Printing date 06.04.2022 Revision: 06.04.2022 Version number 3.02 (replaces version 3.01)

Trade name: XTT reagent solution A

LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic SVHC: Substances of Very High Concern vPvB: very Persistent and very Bioaccumulative Flam. Sol. 2: Flammable solids – Category 2 Self-react. C: Self-reactive substances and mixtures – Type C/D · * Data compared to the previous version altered.

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Safety data sheet

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according to 1907/2006/EC, Article 31

Printing date 06.04.2022 Revision: 06.04.2022 Version number 1.01 (replaces version 1.00)

SECTION 1: Identification of the substance/mix undertaking	cture and of the company/			
· 1.1 Product identifier				
· Trade name: XTT Activator solution B				
 Article number: A8088B Application of the substance / the mixture Biochemistry Laboratory chemicals 				
 1.3 Details of the supplier of the safety data sheet Manufacturer/Supplier: AppliChem GmbH Ottoweg 4 D-64291 Darmstadt 	Tel.: +49 (0)6151 93570 Fax.: +49 (0)6151 935711 msds@applichem.com			
 Further information obtainable from: Dept. Compliance 1.4 Emergency telephone number: +49(0)6151 93570 (Inside not 	ormal buisness hours)			
SECTION 2: Hazards identification				
 • 2.1 Classification of the substance or mixture • Classification according to Regulation (EC) No 1272/2008 The product is not classified, according to the GB CLP regulation. 				
 2.2 Label elements Labelling according to Regulation (EC) No 1272/2008 Void Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. 				
SECTION 3: Composition/information on ingredient	ts			
 · 3.2 Mixtures · Description: ageous solution 				
Dangerous components: Void				

- · Dangerous components: Void
- Additional information: For the wording of the listed hazard phrases refer to section 16.

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GB

Trade name: XTT Activator solution B

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SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Immediately rinse with water.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water.

Seek medical treatment.

• After swallowing: Rinse out mouth.

If symptoms persist consult doctor.

- 4.2 Most important symptoms and effects, both acute and delayed
- No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- Suitable extinguishing agents: Water, CO2, foam, powder.
- 5.2 Special hazards arising from the substance or mixture Formation of toxic gases is possible during heating or in case of fire. In case of fire, the following can be released: Carbon monoxide and carbon dioxide Sulphur oxides (SOx) Non-combustible.
 5.2 Advise for firefightere
- 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.
- Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. Contain escaping vapours with water.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Do not inhale steams/aerosols.
- 6.2 Environmental precautions: Do not allow product to reach sewage system or any water course.
- 6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Clean up affected area.
- **6.4 Reference to other sections** See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly. • **Information about fire - and explosion protection:** The product is not flammable.
- 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.

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Version number 1.01 (replaces version 1.00)

Trade name: XTT Activator solution B

- Further information about storage conditions: Protect from exposure to the light. Keep container sealed.
- Recommended storage temperature: -20°C

· Storage class: 12

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- Appropriate engineering controls No further data; see item 7.
- · Individual protection measures, such as personal protective equipment
- · General protective and hygienic measures:
- Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

· Respiratory protection:

Use suitable respiratory protective device only when aerosol or mist is formed.

Hand protection

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- For the permanent contact gloves made of the following materials are suitable: Nitrile rubber, NBR

Recommended thickness of the material: $\geq 0.11 \text{ mm}$

- Value for the permeation: Level \geq 480 min
- As protection from splashes gloves made of the following materials are suitable: Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm Value for the permeation: Level ≥ 480 min

- Eye/face protection Safety glasses
- Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

- \cdot 9.1 Information on basic physical and chemical properties
- General Information
 Physical state
 Colour:
 Odour:
 Odour threshold:
- Melting point/freezing point:

Fluid Light orange colour Characteristic Not determined. Undetermined.

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(Contd. of page 2)

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Trade name: XTT Activator solution B

	(Contd. of pa
Boiling point or initial boiling point and boi	•
range	Undetermined.
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Not applicable.
Decomposition temperature:	Not determined.
pH	Not determined.
Viscosity:	
Kinematic viscosity	Not determined.
Dynamic:	Not determined.
Solubility	
water:	Fully miscible.
Partition coefficient n-octanol/water (log va	
Vapour pressure at 20 °C:	23 hPa (7732-18-5 water)
Density and/or relative density	
Density:	Not determined.
Relative density	Not determined.
Vapour density	Not determined.
9.2 Other information	
Appearance:	
Form:	Fluid
Important information on protection of he	
and environment, and on safety.	
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard.
Solvent content:	
Water:	>99.0 %
	~99.0 %
Change in condition	Not determined
Evaporation rate	Not determined.
Information with regard to physical haz	zard
classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
	Void
Self-heating substances and mixtures	vuu
Substances and mixtures, which emit	Void
flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
· · · · · ·	Void
Corrosive to metals Desensitised explosives	Void

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

Trade name: XTT Activator solution B

- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions No dangerous reactions known.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: In the event of fire: See chapter 5
- Additional information: light sensitive

SECTION 11: Toxicological information

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity
- · LD/LC50 values relevant for classification:
- Quantitative data on the toxicological effect of this product are not available.
- · Serious eye damage/irritation
- After inhalation: No irritant effect.
- · 11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- vPvB: Not applicable.
- 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

- 12.7 Other adverse effects
- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system. Not hazardous for water.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Chemicals must be disposed of in compliance with the respective national regulations.

- · Uncleaned packaging:
- · Recommendation:

Disposal must be made according to official regulations.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

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Trade name: XTT Activator solution B

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SECTION 14: Transport information		
 14.1 UN number or ID number ADR, ADN, IMDG, IATA 	Void	
 14.2 UN proper shipping name ADR, ADN, IMDG, IATA 	Void	
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA · Class	Void	
 14.4 Packing group ADR, IMDG, IATA 	Void	
· 14.5 Environmental hazards:	Not applicable.	
[·] 14.6 Special precautions for user	Not applicable.	
• 14.7 Maritime transport in bulk according to IMO instruments Not applicable.		
· Transport/Additional information:	Not dangerous according to the above specifications.	
· UN "Model Regulation":	Void	

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- National regulations:
- · Other regulations, limitations and prohibitive regulations
- Substances of very high concern (SVHC) according to REACH, Article 57
- None of the ingredients is listed.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Dept. Compliance

· Abbreviations and acronyms: ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic SVHC: Substances of Very High Concern vPvB: very Persistent and very Bioaccumulative ** Data compared to the previous version altered. GB