SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878

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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code(s) 2965249

Product Name Electrode Cleaning Solution

Unique Formula Identifier (UFI) ND2R-RP8X-J40X-XE80

Molecular weight Not applicable

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

Recommended Use Cleaning solution. Water Analysis.

Uses advised against Consumer use

1.3. Details of the supplier of the safety data sheet

Supplier
HACH LANGE GmbH
Willstätterstr. 11
D-40549 Düsseldorf
Tel: +49 (0)211 5288-383
sds@hach.com

Responsible country contact:

HACH UK
Laser House
Ground Floor, Suite B
Waterfront Quay, Salford Quays
GB - Manchester, M50 3XW
Tel. +44 (0) 161 872 1487
info-uk@hach.com

HACH Ireland
Unit 34 GB Business Park
Little Island
IRL-Co. Cork
T45 H681
Tel. +353 (0)146 02 522
info-ie@hach.com

E-mail address info-uk@hach.com

info-ie@hach.com

1.4. Emergency telephone number

UK: Chemtrec: +44 20 3807 3798
IE: National Poisons Information Centre (NPIC) 01 809 2566 (24/7)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation	Category 1 - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

2.2. Label elements

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

Contains Potassium hydroxide; Sodium hypochlorite



Signal word
Danger

Hazard statements
H314 - Causes severe skin burns and eye damage

Precautionary statements
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

2.3. Other hazards

No information available.

PBT & vPvB
This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT)
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

Endocrine Disruptor Information
This product does not contain any known or suspected endocrine disruptors.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	CAS No. EC No. Index No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Potassium hydroxide	1310-58-3 215-181-3 019-002-00-8	<1%	Met. Corr. 1 - H290 Acute Tox. 4 - H302 Skin Corr. 1A - H314 Eye Dam. 1 - H318	Eye Irrit. 2 :H319: 0.5%<=C<2% Skin Corr. 1A :H314: C>=5% Skin Corr. 1B :H314: 2%<=C<5% Skin Irrit. 2 :H315: 0.5%<=C<2%	-	-
Sodium hypochlorite	7681-52-9 231-668-3 017-011-00-1	<1%	Skin Corr. 1B - H314 Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	:EUH031: C>=5%	10	1
5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4 247-500-7 -	<0.01%	Acute Tox. 3 - H301 Acute Tox. 3 - H311 Skin Corr. 1B - H314 Skin Sens. 1 - H317 Eye Dam. 1 - H318 STOT SE 3 - H335 Aquatic Acute 1 - H400		-	-
2-methylisothiazol-3(2H)-one	2682-20-4 220-239-6 613-326-00-9	<0.01%	Acute Tox. 3 - H301 Acute Tox. 3 - H311 Skin Corr. 1B - H314 Skin Sens. 1A - H317 Eye Dam. 1 - H318 Acute Tox. 2 - H330 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Skin Sens. 1A :H317: C>=0.0015%	10	1

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Potassium hydroxide 1310-58-3	333 mg/kg	None reported	None reported	None reported	None reported
5-chloro-2-methyl-2H-isothiazol-3-one 26172-55-4	481 mg/kg	None reported	None reported	None reported	None reported
2-methylisothiazol-3(2H)-one 2682-20-4	249 mg/kg	200 mg/kg	0.11 mg/L	None reported	None reported

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical attention.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

Symptoms Burning sensation.

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

Note to doctors Treat symptomatically.

Section 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous combustion products This material will not burn.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protective equipment.

Additional information Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is

recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Keep out of the reach of children. Store away from other materials.

7.3. Specific end use(s)

Specific use(s) Analytical reagent.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits

Chemical name	European Union	United Kingdom	Ireland
Potassium hydroxide 1310-58-3	-	STEL: 2 mg/m³	STEL: 2 mg/m³

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
Tetrapotassium pyrophosphate 7320-34-5	-	-	17.63 mg/m³ [4] [6]
Sodium hypochlorite 7681-52-9	-	0.5 % in mixture (weight basis) [5] [6]	1.55 mg/m³ [4] [6] 3.1 mg/m³ [4] [7] 1.55 mg/m³ [5] [6] 3.1 mg/m³ [5] [7]
Potassium hydroxide 1310-58-3	-	-	1 mg/m³ [5] [6]
2-methylisothiazol-3(2H)-one 2682-20-4	-	-	0.021 mg/m³ [5] [6] 0.043 mg/m³ [5] [7]

Notes
[4] Systemic health effects
[5] Local health effects
[6] Long term
[7] Short term

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Sodium hypochlorite 7681-52-9	11.1 mg/kg food 0.21 µg/L	0.26 µg/L	11.1 mg/kg food 0.042 µg/L	-	-
Magnesium chloride 7786-30-3	1.6 mg/L	5.48 mg/L	0.16 mg/L	-	-
2-methylisothiazol-3(2H)-one 2682-20-4	3.39 µg/L	3.39 µg/L	3.39 µg/L	3.39 µg/L	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
Sodium hypochlorite 7681-52-9	-	-	4.69 mg/L	-	-
Magnesium nitrate 10377-60-3	-	-	18 mg/L	-	-
Magnesium chloride 7786-30-3	1050 mg/kg sediment dw	105 mg/kg sediment dw	42 mg/L	1045 mg/kg soil dw	-
2-methylisothiazol-3(2H)-one 2682-20-4	-	-	0.23 mg/L	0.0471 mg/kg soil dw	-

8.2. Exposure controls

Engineering controls Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Personal protective equipment

Eye/face protection Tight sealing safety goggles. Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374-1:2016 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)	Wear protective Viton™ gloves	0,70 mm	>480 minutes
Short term	Wear protective nitrile rubber gloves	0,20 mm	>30 minutes

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Avoid contact with eyes, skin and clothing.

Respiratory protection Ensure adequate ventilation. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Recommended filter type: ABEK-P3.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Liquid

Colour colourless
Odour Odourless.

Property	Values	Remarks • Method
Melting point / freezing point	~ 0 °C	
Initial boiling point and boiling range	~ 100 °C	
Flammability	No data available	
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
pH	12.2	@ 20 °C
Kinematic viscosity	No data available	
Dynamic viscosity	No data available	
Partition coefficient	No data available	
Vapour pressure	3.16 kPa at 25 °C	
Relative density	1 g/mL	@ 20 °C
Relative vapor density	0.62	
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Violent reaction will occur	No data available	No information available

9.2. Other information

Molecular weight Not applicable
9.2.1. Information with regards to physical hazard classes

Corrosive to metals
Steel Corrosion Rate No data available
Aluminum Corrosion Rate No data available

9.2.2. Other safety characteristics No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerisation Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Conditions to avoid Exposure to air or moisture over prolonged periods.

10.5. Incompatible materials

Incompatible materials Acids. Bases. Oxidising agent.

10.6. Hazardous decomposition products

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating and toxic gases and vapours.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity
Based on available data, the classification criteria are not met

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium hydroxide	Rat LD_{50}	333 mg/kg	None reported	None reported	Vendor SDS
5-chloro-2-methyl-2H -isothiazol-3-one	Rat LD_{50}	481 mg/kg	None reported	None reported	IUCLID
2-methylisothiazol-3(2H)-one	LD_{50} Rat	249 mg/kg	None reported	None reported	LOLI

Dermal Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
2-methylisothiazol-3(2H)-one	LD_{50} Rabbit	200 mg/kg	None reported	None reported	LOLI

Inhalation (Dust/Mist) Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
2-methylisothiazol-3(2H)-one	LC_{50} Rat	0.11 mg/L	None reported	None reported	LOLI

Acute Toxicity Estimate (ATE) Not applicable
mg/kg

Unknown acute toxicity
1E-05 % of the mixture consists of ingredient(s) of unknown toxicity.

Skin corrosion/irritation
Causes severe burns.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium hydroxide	Draize Test	Human	50 mg	24 hours	Corrosive to skin	RTECS
5-chloro-2-methyl-2H-isothiazol-3-one	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	None reported	None reported	Corrosive to skin	OECD 429: Skin Sensitization: Local Lymph Node Assay

Serious eye damage/eye irritation
Classification based on data available for ingredients. Causes serious eye damage. Causes burns.

Mixture No data available.

Substance Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium hydroxide	Existing human experience	Human	None reported	None reported	Corrosive to eyes	ERMA
5-chloro-2-methyl-2H-isothiazol-3-one	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	None reported	None reported	Eye irritant	ERMA OECD 429: Skin Sensitization: Local Lymph Node Assay
2-methylisothiazol-3(2H)-one	None reported	None reported	None reported	None reported		ECHA

Respiratory or skin sensitisation
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

Skin Sensitization Exposure Route:

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium hypochlorite	OECD Test No. 406: Skin Sensitisation	Guinea pig	No sensitisation responses were observed.	ECHA
Potassium hydroxide	Intracuteaneus Test	Guinea pig	No sensitisation responses were observed.	IUCLID
5-chloro-2-methyl-2H-isothiazol-3-one	OECD Test No. 406: Skin Sensitisation	Guinea pig	Confirmed to be a skin sensitizer	IUCLID

STOT - single exposure
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite	Human TD_{Lo}	1000 mg/kg	None reported	**Behavioral** Somnolence (general depressed activity) **Vascular** BP lowering not characterized in autonomic section **Skin and Appendages** Corrosive to skin after topical application	RTECS

STOT - repeated exposure
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite	Rat TD_{Lo}	140 mg/kg	63 days	**Endocrine** Changes in spleen weight **Immunological Including Allergic** Decrease in cellular immune response **Biochemical** Intermediary metabolism (lipids including transport)	RTECS

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

***Mixture invitro* Data** No data available.

***Substance invitro* Data** Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium hypochlorite	Cytogenetic analysis	Human lymphocyte	100 mg/L	24 hours	Positive test result for mutagenicity	RTECS
Potassium hydroxide	Cytogenetic analysis	Rat ascites tumor	1800 mg/kg	None reported	Positive test result for mutagenicity	RTECS

***Mixture invivo* Data** No data available.

***Substance invivo* Data** No data available.

Carcinogenicity
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance No data available.

Reproductive toxicity
Based on available data, the classification criteria are not met.

Mixture No data available.

Substance Test data reported below.

Oral Exposure Route:

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite	Rat NOAEL	>= 5 mg/kg	Single generation	No reproductive or developmental toxic effects observed	ECHA

Aspiration hazard
Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

11.2.1. Endocrine disrupting properties
This product does not contain any known or suspected endocrine disruptors.

11.2.2. Other information
Other adverse effects No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity Based on available data, the classification criteria are not met.

Unknown aquatic toxicity Contains 1E-05 % of components with unknown hazards to the aquatic environment.

Mixture

Acute aquatic toxicity: No data available.

Aquatic Chronic Toxicity: No data available.

Substance

Acute aquatic toxicity: Test data reported below.

Fish:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite	96 hours	*Clupea pallasi*	LC_{50}	0.065 mg/L	Vendor SDS
Potassium hydroxide	96 hours	*Gambusia affinis*	LC_{50}	80 mg/L	ERMA
5-chloro-2-methyl-2 H-isothiazol-3-one	96 hours	*Oncorhynchus mykiss*	LC_{50}	0.19 mg/L	EPA
2-methylisothiazol-3 (2H)-one	96 hours	None reported	LC_{50}	0.7 mg/L	ECOSARS

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite	48 Hours	*Daphnia magna*	LC_{50}	0.032 mg/L	Vendor SDS
5-chloro-2-methyl-2 H-isothiazol-3-one	48 Hours	None reported	LC_{50}	0.56 mg/L	EPA
2-methylisothiazol-3 (2H)-one	48 Hours	None reported	LC_{50}	0.18 mg/L	ECOSARS

Algae:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite	72 Hours	*Pseudokirchnerella subcapitata*	EC_{50}	0.05 mg/L	ECHA
5-chloro-2-methyl-2 H-isothiazol-3-one	72 Hours	None reported	EC_{50}	0.021 mg/L	EPA
2-methylisothiazol-3 (2H)-one	96 hours	None reported	EC_{50}	0.448 mg/L	ECOSARS

Aquatic Chronic Toxicity: Test data reported below.

Fish:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite	28 days	*Menidia peninsulae*	NOEC	0.04 mg/L	ECHA

Crustacea:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite	15 days	*Crassostrea virginica*	NOEC	0.007 mg/L	ECHA

Algae:

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite	7 days	None reported	NOEC	0.0021 mg/L	ECHA

12.2. Persistence and degradability

Mixture No data available.

12.3. Bioaccumulative potential

Mixture: No data available.

Partition coefficient No data available

12.4. Mobility in soil

Soil Organic Carbon-Water Partition Coefficient No data available

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Sodium hypochlorite	Not PBT/vPvB
Potassium hydroxide	Not PBT/vPvB
2-methylisothiazol-3(2H)-one	Not PBT/vPvB

12.6. Endocrine disrupting properties

Endocrine Disruptor Information: This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

No information available.

Hazardous to the ozone layer: Not applicable

Ozone depletion potential (ODP): No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Advice on Disposal

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Waste disposal number (residues/unused products)

160506* WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

Waste disposal number (used product)

160506* WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste.

Contaminated packaging Dispose of contents/containers in accordance with local regulations.

Other Information Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

ADR

14.1 UN number or ID number 1814
14.2 UN proper shipping name POTASSIUM HYDROXIDE SOLUTION
14.3 Transport hazard class(es) 8
14.4 Packing Group II
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions None
Classification code C5
Tunnel restriction code (E)

IATA

14.1 UN number or ID number UN1814

14.2 UN proper shipping name Potassium hydroxide solution
14.3 Transport hazard class(es) 8
14.4 Packing group II
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions A3, A803

IMDG
14.1 UN number or ID number UN1814
14.2 UN proper shipping name POTASSIUM HYDROXIDE SOLUTION
14.3 Transport hazard class(es) 8
14.4 Packing Group II
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions None
EmS-No F-A, S-B
14.7 Maritime transport in bulk according to IMO instruments No information available

Additional information
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

Section 15: REGULATORY INFORMATION

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

National regulations

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Take note of Directive 94/33/EC on the protection of young people at work

Authorisations and/or restrictions on use:
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Sodium hypochlorite - 7681-52-9	75	
Potassium hydroxide - 1310-58-3	75	
2-methylisothiazol-3(2H)-one - 2682-20-4	75	

Persistent Organic Pollutants Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU) Non-controlled

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

Germany
Water hazard class (WGK) slightly hazardous to water (WGK 1)

France
Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Sodium hypochlorite 7681-52-9	RG 65	-
5-chloro-2-methyl-2H-isothiazol-3-one 26172-55-4	RG 15bis,RG 74	-
2-methylisothiazol-3(2H)-one 2682-20-4	RG 15bis,RG 74	-

10. Rozporządzenie Komisji (UE) 2020/878 z dnia 18 czerwca 2020 r. zmieniające załącznik II dorozporządzenia (WE) nr1907/2006 Parlamentu Europejskiego i Rady w sprawie rejestracji, oceny, udzielaniazezwoleń i stosowanych ograniczeń wzakresie chemikaliów (REACH).

International Inventories

EINECS/ELINCS	Complies
TSCA	Complies
DSL/NDSL	Complies
ENCS	Complies
IECSC	Complies
KECI	Complies
PICCS	Complies
AICS	Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report Chemical safety assessments for substances in this mixture were not carried out.

Section 16: OTHER INFORMATION

Issue Date 08-May-2014

Revision Date 30-Jul-2026

Revision Note updated SDS sections:
2
4
8
11
12

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

**	Hazard Designation
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieure
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service Number
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging of substances and mixtures [Regulation (EC) No. 1272/2008]
DNEL	Derived No Effect Level (DNEL)
EC	European Community
ECHA	ECHA (The European Chemicals Agency)
EC50	Effective Concentration to 50% of a test population
EEC	European Economic Community
EN	European Standard
IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)
IATA-DGR	International Air Transport Association - Dangerous Goods Regulations
ICAO	International Civil Aviation Organisation
ICAO-TI	International Civil Aviation Organization - Technical Instructions
IUCLID	IUCLID (The International Uniform Chemical Information Database)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LOAEL	Lowest observed adverse effect level
LOAEC	Lowest observed adverse effect concentration
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
MAK	Maximale Arbeitsplatz-Konzentration, a German expression corresponding to threshold limit value, which relates to safe daily exposure levels to chemical substances
NOAEL	No Observed Adverse Effect Level
NOAEC	No observed adverse effect concentration
OSHA	Occupational Safety and Health Administration of the US Department of Labour
PEC	Predicted Effect Concentration
PNEC	Predicted No Effect Concentration (PNEC)
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals [Regulation (EC) No. 1907/2006])
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
TWA	TWA (time-weighted average)
SKN*	Skin designation
SKN+	Skin sensitisation
STEL	STEL (Short Term Exposure Limit)
STOT	Specific Target Organ Toxicity
STOT RE	Specific target organ toxicity (repeated exposure)
STOT SE	Specific target organ toxicity (single exposure)
SVHC	Substances of Very High Concern
TLV	Threshold Limit Value
TRGS	Technical rules for hazardous substances, Germany
TSCA	Toxic Substances Control Act
UN	United Nations
vPvB	very persistent and very bioaccumulative
VOC	Volatile organic compounds
AwSV	Administrative regulation of water polluting substances, Germany

Key literature references and sources for data
See Section 11: TOXICOLOGICAL INFORMATION
See Section 12: ECOLOGICAL INFORMATION

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used

Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
Ozone	Calculation method

Full text of H-Statements referred to under section 3
EUH031 - Contact with acids liberates toxic gas
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Training Advice Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Prepared By Hach Product Compliance Department

Restrictions on use None

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
Regulation (EC) No. 1907/2006 as amended by Regulation (EU) No. 2020/878, and Regulation (EC) No. 1272/2008

End of Safety Data Sheet