SAFETY DATA SHEET

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

Version 9.4
Revision Date 11.09.2025
Print Date 12.09.2025

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

1.1 Product identifiers

Product name : Sodium hydroxide pellets for analysis EMSURE®

Product Number : 1.06498
Catalogue No. : 106498
Brand : Millipore
Index-No. : 011-002-00-6
REACH No. : 01-2119457892-27-XXXX
CAS-No. : 1310-73-2

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

Identified uses : Reagent for analysis, Chemical production

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Ireland Limited
Vale Road
Arklow
CO WICKLOW
CO WICKLOW
IRELAND

Telephone : +353 402-20300
E-mail address : TechnicalService@merckgroup.com

1.4 Emergency telephone number

Emergency Phone # : +(353)-19014670 (CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1	H290: May be corrosive to metals.
Skin corrosion, Sub-category 1A	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Danger

Hazard Statements :

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

Precautionary statements :

Prevention:

P234	Keep only in original packaging.
P260	Do not breathe dust.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Reduced Labelling (<= 125 ml)

Hazard pictograms :

Signal Word	Danger
Hazard Statements	
H314	Causes severe skin burns and eye damage.
Precautionary Statements	
P260	Do not breathe dust.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

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rinsing.

Supplemental Hazard Statements	none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Index-No. : 011-002-00-6

EC-No. : 215-185-5

Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)	M-Factor, SCL, ATE
sodium hydroxide	1310-73-2 215-185-5	>= 90 - <= 100	specific concentration limit Skin Corr. 1A; H314 >= 5 % Skin Corr. 1B; H314 2 - < 5 % Skin Irrit. 2; H315 0.5 - < 2 % Eye Irrit. 2; H319 0.5 - < 2 % Met. Corr. 1; H290 >= 0.4 %

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : First aiders need to protect themselves.
Show this safety data sheet to the doctor in

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attendance.

If inhaled	:	After inhalation: fresh air. Call in physician.
In case of skin contact	:	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
In case of eye contact	:	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
If swallowed	:	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Unsuitable extinguishing media	:	Water Foam

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting	:	Not combustible. Ambient fire may liberate hazardous vapours.
Hazardous combustion products	:	Sodium oxides

5.3 Advice for firefighters

Special protective equipment for fire-fighters	:	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Further information	:	Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Advice for non-emergency personnel: Avoid inhalation of dusts.

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Avoid substance contact.
Ensure adequate ventilation.
Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Environmental precautions : Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).
Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No aluminium, tin, or zinc containers.

No metal containers.

Further information on storage conditions : Tightly closed. Dry.

Storage class (TRGS 510) : 8B, Non-combustible, corrosive hazardous materials

Further information on storage stability : Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type	Control parameters	Basis

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		(Form of exposure)		
sodium hydroxide	1310-73-2	OELV - 15 min (STEL)	2 mg/m3	IE OEL

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Tightly fitting safety goggles

Hand protection

Material	:	Nitrile rubber
Break through time	:	480 min
Glove thickness	:	0.11 mm
Protective index	:	Full contact
Manufacturer	:	KCL 741 Dermatril® L

Material	:	Nitrile rubber
Break through time	:	480 min
Glove thickness	:	0.11 mm
Protective index	:	Splash contact
Manufacturer	:	KCL 741 Dermatril® L

Remarks : This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin and body protection : protective clothing

Respiratory protection : required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: : Filter type P2

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Advice : Do not let product enter drains.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	solid (20 °C, 1,013 hPa)
Color	:	white
Odor	:	odourless
Odor Threshold	:	Not applicable
Melting point	:	318 °C
Boiling point	:	1,390 °C (1,013 hPa)
Flammability	:	The product is not flammable.
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Flash point	:	Not applicable
Autoignition temperature	:	Not applicable
Decomposition temperature	:	No data available
pH	:	ca. > 14 (20 °C) Concentration: 100 g/l
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Flow time	:	No data available
Solubility(ies)		
Water solubility	:	1,090 g/l (20 °C)

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Partition coefficient: n-octanol/water	:	Not applicable for inorganic substances
Vapor pressure	:	No data available
Relative density	:	No data available
Density	:	2.13 g/cm3 (20 °C)
Relative vapour density	:	1.38 (Air = 1.0)
Particle characteristics	:	No data available

9.2 Other information

Explosives	:	Not classified as explosive.
Oxidizing properties	:	none
Burning rate	:	No data available
Metal corrosion rate	:	May be corrosive to metals.
Evaporation rate	:	No data available
Molecular weight	:	40 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Hazardous reactions : Violent reactions possible with:

Acetone
Chlorine
Ethylene oxide
Fluorine
Hydrogen halides
Hydrazine hydrate
hydroxylamine
Acid anhydrides

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Acrolein
Acid chlorides
Acids
sulfuric acid
Chloroform
Water
hydrogen peroxide
anhydrides
phosphides
halogen-halogen compounds
trichloroethene
can decompose violently in contact with:

Organic Substances
hydrogen sulphide
Risk of ignition or formation of inflammable gases or vapours with:
powdered aluminium
Ammonium salts
persulfates
Sodium borohydride
phosphorus
Oxides of phosphorus
Halogenated hydrocarbon
Light metals
Metals
Risk of explosion/exothermic reaction with:

Bromine
Calcium
in powder form
furfuryl alcohol
Nitromethane
Peroxides
organic nitro compounds
Nitriles
Acrylic monomers
Chloroform
with
Acetone
Nitrobenzene
with
Methanol
Nitrobenzene
with
salts
magnesium
Zinc
and
Tin
(in the presence of atmospheric oxygen and/or moisture)

10.4 Conditions to avoid

Conditions to avoid : no information available

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10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
Symptoms: burns of mucous membranes, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
Dermal: No data available

Skin corrosion/irritation
Skin - Rabbit
Result: Causes burns.
Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Causes serious eye damage.
(OECD Test Guideline 405)
Remarks: (Regulation (EC) No 1272/2008, Annex VI)
Remarks: Causes serious eye damage.

Respiratory or skin sensitization
Patch test: - In vitro study
Result: negative
Remarks: (ECHA)

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment	The substance/mixture does not contain components considered to have endocrine

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disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Components:

sodium hydroxide:

Toxicity to fish	:	LC50 (Gambusia affinis (Mosquito fish)): 125 mg/l Exposure time: 96 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Ceriodaphnia (water flea)): 40.4 mg/l End point: Immobilization Exposure time: 48 h Remarks: (ECHA)
Toxicity to microorganisms	:	EC50 (Photobacterium phosphoreum): 22 mg/l Exposure time: 15 min Remarks: (External MSDS)

Ecotoxicology Assessment

Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.

12.2 Persistence and degradability

Components:

sodium hydroxide:

Biodegradability	:	Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Components:

sodium hydroxide:

Partition coefficient: n-octanol/water	:	Remarks: Not applicable for inorganic substances

12.4 Mobility in soil

No data available

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12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

sodium hydroxide:

Assessment : PBT/vPvB: Not applicable for inorganic substances

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

No data available

12.7 Other adverse effects

Components:

sodium hydroxide:

Additional ecological information : Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

Neutralisation possible in waste water treatment plants.

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Notice Directive on waste 2008/98/EC.

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SECTION 14: Transport information

14.1 UN number or ID number

ADR	:	UN 1823
IMDG	:	UN 1823
IATA	:	UN 1823

14.2 UN proper shipping name

ADR	:	SODIUM HYDROXIDE, SOLID
IMDG	:	SODIUM HYDROXIDE, SOLID
IATA	:	Sodium hydroxide, solid

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADR	:	8	
IMDG	:	8	
IATA	:	8	

14.4 Packing group

ADR

Packing group	:	II
Classification Code	:	C6
Hazard Identification Number	:	80
Labels	:	8
Tunnel restriction code	:	(E)

IMDG

Packing group	:	II
Labels	:	8
EmS Code	:	F-A, S-B

IATA (Cargo)

Packing instruction (cargo aircraft)	:	863
Packing instruction (LQ)	:	Y844
Packing group	:	II
Labels	:	Class 8 - Corrosive substances

IATA_P (Passenger)

Packing instruction (passenger aircraft)	:	859
Packing instruction (LQ)	:	Y844
Packing group	:	II
Labels	:	Class 8 - Corrosive substances

14.5 Environmental hazards

ADR

Environmentally	:	no

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hazardous

IMDG

Marine pollutant : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.		Not applicable

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Relevant changes since previous version

Annex		
H290	:	May be corrosive to metals.
H314	:	Causes severe skin burns and eye damage.

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H315	:	Causes skin irritation.
H319	:	Causes serious eye irritation.

Full text of other abbreviations

Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Eye Irrit.	:	Eye irritation
Met. Corr.	:	Corrosive to metals
IE OEL	:	Ireland. List of Chemical Agents and Carcinogens with Occupational Exposure Limit Values - Code of Practice, Schedule 1 and 2
IE OEL / OELV - 15 min (STEL)	:	Occupational exposure limit value (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information	:	The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate

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IE / EN

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Annex: Exposure scenario

Identified uses:

Use: Industrial use

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
SU 3, SU9, SU 10: Industrial uses: Uses of substances as such or in preparations at industrial sites, Manufacture of fine chemicals, Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
PC19: Intermediate **PC21:** Laboratory chemicals
PROC1: Use in closed process, no likelihood of exposure **PROC2:** Use in closed, continuous process with occasional controlled exposure **PROC3:** Use in closed batch process (synthesis or formulation) **PROC4:** Use in batch and other process (synthesis) where opportunity for exposure arises **PROC5:** Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) **PROC8a:** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities **PROC8b:** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities **PROC9:** Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC10:** Roller application or brushing **PROC14:** Production of preparations or articles by tabletting, compression, extrusion, pelletisation **PROC15:** Use as laboratory reagent
ERC1, ERC2, ERC4, ERC6a, ERC6b: Manufacture of substances, Formulation of preparations, Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use resulting in manufacture of another substance (use of intermediates), Industrial use of reactive processing aids

Use: Professional use

SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU20, SU24: Health services, Scientific research and development
PC21: Laboratory chemicals
PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities **PROC9:** Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC15:** Use as laboratory reagent
ERC8a, ERC8b: Wide dispersive indoor use of processing aids in open systems, Wide dispersive indoor use of reactive substances in open systems

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1. Short title of Exposure Scenario: Industrial use

Main User Groups	:	**SU 3**
Sectors of end-use	:	**SU 3, SU9, SU 10**
Chemical product category	:	**PC19, PC21**
Process categories	:	**PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15**
Environmental Release Categories	:	**ERC1, ERC2, ERC4, ERC6a, ERC6b:**

2. Exposure scenario

2.1 Contributing scenario controlling environmental exposure for: ERC1, ERC2, ERC4, ERC6a, ERC6b

Technical conditions and measures / Organizational measures

Water	:	Solutions with high pH-value must be neutralized before discharge.

Do not allow uncontrolled discharge of product into the environment.

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC14, PROC15

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use)	:	Aqueous solution

Frequency and duration of use

Frequency of use	:	600 minutes/day
Frequency of use	:	200 days/year

Other operational conditions affecting workers exposure

Outdoor / Indoor	:	Indoor without local exhaust ventilation (LEV)

Technical conditions and measures

Good work practice required., Ensure adequate ventilation, especially in confined areas.

Conditions and measures related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374), coverall and eye protection., Breathing apparatus only if aerosol or dust is formed.

3. Exposure estimation and reference to its source

Environment

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterisation is not necessary (REACH Annex I section 5.0).

Workers

Contributin	Exposure Assessment	Specific	Value	Level of	RCR*

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g Scenario	Method	conditions		Exposure	
PROC1	ECETOC TRA 3	longterm, inhalative, local			0.01
PROC2	ECETOC TRA 3	longterm, inhalative, local			0.01
PROC3	ECETOC TRA 3	longterm, inhalative, local			0.10
PROC4	ECETOC TRA 3	longterm, inhalative, local			0.50
PROC5	ECETOC TRA 3	longterm, inhalative, local			0.50
PROC8a	ECETOC TRA 3	longterm, inhalative, local			0.50
PROC8b	ECETOC TRA 3	longterm, inhalative, local			0.10
PROC9	ECETOC TRA 3	longterm, inhalative, local			0.10
PROC10	ECETOC TRA 3	longterm, inhalative, local			0.50
PROC14	ECETOC TRA 3	longterm, inhalative, local			0.10
PROC15	ECETOC TRA 3	longterm, inhalative, local			0.10

*Risk characterisation ratio

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).

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1. Short title of Exposure Scenario: Professional use

Main User Groups : **SU 22**
Sectors of end-use : **SU20, SU24**
Chemical product category : **PC21**
Process categories : **PROC8a, PROC9, PROC15**
Environmental Release Categories : **ERC8a, ERC8b:**

2. Exposure scenario

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8b

Technical conditions and measures / Organizational measures

Water : Solutions with high pH-value must be neutralized before discharge.

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Do not allow uncontrolled discharge of product into the environment.

2.2 Contributing scenario controlling worker exposure for: PROC8a, PROC9, PROC15

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) : Aqueous solution

Frequency and duration of use

Frequency of use : 600 minutes/day
Frequency of use : 200 days/year

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor without local exhaust ventilation (LEV)

Technical conditions and measures

Good work practice required., Ensure adequate ventilation, especially in confined areas.

Conditions and measures related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374), coverall and eye protection., Breathing apparatus only if aerosol or dust is formed.

3. Exposure estimation and reference to its source

Environment

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterisation is not necessary (REACH Annex I section 5.0).

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR*
PROC8a	ECETOC TRA 3	longterm, inhalative, local			0.50
PROC9	ECETOC TRA 3	longterm, inhalative, local			0.10
PROC15	ECETOC TRA 3	longterm, inhalative, local			0.10

*Risk characterisation ratio

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).

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