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P304+P341

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P314

Get medical advice/attention if you feel unwell.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
205-483-3	2-aminoethanol, ethanolamine	3 - < 5 %
141-43-5	C - Corrosive, Xn - Harmful, Xi - Irritant R20/21/22-34-37	
603-030-00-8	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, STOT SE 3, Aquatic Chronic 3; H302 H312 H332 H314 H335 H412	
01-2119486455-28		
229-912-9	disodium metasilicate	3 - < 5 %
10213-79-3	C - Corrosive R34	
	Met. Corr. 1, Skin Corr. 1B, STOT SE 3; H290 H314 H335	

Full text of R, H and EUH phrases: see section 16.

Labelling for contents according to Regulation (EC) No 648/2004

< 5 % anionic surfactants.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

After inhalation

Provide fresh air. Medical treatment necessary.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

No information available.

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

Treat symptomatically.



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SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

not applicable

5.2. Special hazards arising from the substance or mixture

Non-flammable.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Further information on handling

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations.

Advice on storage compatibility

Do not store together with: Acid, Oxidising agent

Further information on storage conditions

Protect from frost.

7.3. Specific end use(s)

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SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
141-43-5	2-Aminoethanol	1	2.5		TWA (8 h)	WEL
		3	7.6		STEL (15 min)	WEL

Additional advice on limit values

- a no restriction
- b End of exposure or shift
- c in long-term exposure: after several shifts
- d prior to next shift

STEL (EC) : Short Term Exposure Limit

TWA (EC): time-weighted average

U: Urea

B: Blood

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material: NBR (Nitrile rubber) Breakthrough time (maximum wearing time) 480min

Thickness of the glove material 0,45 mm

DIN EN 374

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..

Filtering device with filter or ventilator filtering device of type: A

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	red
Odour:	mild

Test method



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pH-Value (at 20 °C): 12 DIN 19268

Changes in the physical state

Melting point: not determined

Initial boiling point and boiling range: 100 °C

Sublimation point: No information available.

Softening point: No information available.

: No information available.

Flash point: not applicable

Flammability

Solid: not applicable

Gas: not applicable

Lower explosion limits: not applicable

Upper explosion limits: not applicable

Ignition temperature: not applicable

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidizing.

Vapour pressure: not determined

Vapour pressure: No information available.

Density (at 20 °C): 1,01 g/cm³ DIN 51757

Bulk density: No information available.

Water solubility: highly soluble.

Solubility in other solvents

not determined

Partition coefficient: not determined

Viscosity / dynamic: No information available. DIN 53019-1

Viscosity / kinematic: No information available.

(at 40 °C)

Flow time: No information available.

(at 20 °C)

Vapour density: not determined

Evaporation rate: not determined

Solvent separation test: No information available.

Solvent content: No information available.

9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity**10.1. Reactivity**

Possibility of hazardous reactions.

10.2. Chemical stability



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The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Exothermic reaction with: Acid, Peroxide, Oxidising agent.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

Keep away from: Acid, Oxidising agent, Peroxide. Reacts with : Acid, Oxidizing agents.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

No information available.

Acute toxicity

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

Acute toxicity

CAS No	Chemical name				
	Exposure route	Method	Dose	Species	Source
141-43-5	2-aminoethanol, ethanolamine				
	oral	LD50	1515 mg/kg	Rat	
	dermal	LD50	1025 mg/kg	Rabbit	IUCLID
	inhalative vapour	ATE	11 mg/l		
	inhalative (4 h) aerosol	LC50	1,3 mg/l	Rat	
10213-79-3	disodium metasilicate				
	oral	LD50 mg/kg	1152-1349	Rat	
	dermal	LD50 mg/kg	>5000	Rat	

Irritation and corrosivity

Causes severe skin burns and eye damage.

In vitro Skin Irritation: Human Skin Model Test (OECD 439): Not an irritant. according to UN GHS according to EU CLP: no category

Sensitising effects

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

STOT-single exposure

May cause respiratory irritation. (2-aminoethanol, ethanolamine), (disodium metasilicate)

Severe effects after repeated or prolonged exposure

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

No indications of human carcinogenicity exist.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.



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Aspiration hazard

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

Specific effects in experiment on an animal

No information available.

Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

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

not applicable

CAS No	Chemical name	Method	Dose	[h] [d]	Species	Source
141-43-5	2-aminoethanol, ethanolamine					
	Acute fish toxicity	LC50	150 mg/l	96 h	Onchorhynchus mykiss	IUCLID
	Acute algae toxicity	ErC50	22 mg/l	72 h	Desmodesmus subspicatus	
	Acute crustacea toxicity	EC50	65 mg/l	48 h	Daphnia magna	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
141-43-5	2-aminoethanol, ethanolamine	-1,91 (25°C)

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

070101 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals; aqueous washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of used product

070101 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals; aqueous washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of contaminated packaging



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150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances
Classified as hazardous waste.

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number: UN 2491
14.2. UN proper shipping name: ETHANOLAMINE SOLUTION
14.3. Transport hazard class(es): 8
14.4. Packing group: III
 Hazard label: 8
 Classification code: C7
 Limited quantity: 5 L
 Transport category: 3
 Hazard No: 80
 Tunnel restriction code: E

Other applicable information (land transport)

Limited quantity: E1

Inland waterways transport (ADN)

14.1. UN number: UN 2491
14.2. UN proper shipping name: ETHANOLAMINE SOLUTION
14.3. Transport hazard class(es): 8
14.4. Packing group: III
 Hazard label: 8
 Classification code: C7
 Limited quantity: 5 L

Other applicable information (inland waterways transport)

Limited quantity: E1

Marine transport (IMDG)

14.1. UN number: UN 2491
14.2. UN proper shipping name: ETHANOLAMINE
14.3. Transport hazard class(es): 8
14.4. Packing group: III
 Hazard label: 8
 Marine pollutant: No
 Special Provisions: 223
 Limited quantity: 5 L
 EmS: F-A, S-B

Other applicable information (marine transport)

Limited quantity: E1

Air transport (ICAO)

14.1. UN number: UN 2491
14.2. UN proper shipping name: ETHANOLAMINE SOLUTION



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14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	1 L
IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	856
IATA-max. quantity - Cargo:	60 L

Other applicable information (air transport)

Limited quantity: E1
Passenger-LQ: Y841

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: strongly corrosive.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

1999/13/EC (VOC): No information available.

Additional information

To follow: 850/2004/EC , 79/117/EEC , 689/2008/EC
Regulation (EC) No. 648/2004 (Detergents regulation)

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

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

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s):
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.

Abbreviations and acronyms

ADR: Accord européen sur le transport 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 Harmonized 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
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%



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Relevant R phrases (number and full text)

- 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- 34 Causes burns.
- 35 Causes severe burns.
- 37 Irritating to respiratory system.

Relevant H and EUH statements (number and full text)

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H412 Harmful to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)