

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Reference number: MONOETHANOLAMINE Issue date: 9/24/2008 Revision date: 6/19/2024 Supersedes version of: 7/22/2015 Version: 6.0

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

1.1. Product identifier

Product form Substance name EC-No. CAS-No. REACH registration No. Product code Formula Substance
MONOETHANOLAMINE
205-483-3
141-43-5
01-2119486455-28
MONOETHANOLAMINE
C2H7NO

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

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

INTERCHIMIE ZAC du Parc 13 rue Louis Blériot FR- 77290 COMPANS T T: +33 (0)1 64 77 76 27 gualite@interchimie.fr, www.interchimie.fr

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal), Category 4	H312
Acute toxicity (inhal.), Category 4	H332
Skin corrosion/irritation, Category 1, Sub-Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity – Single exposure, Category 3,	H335
Respiratory tract irritation	
Hazardous to the aquatic environment – Chronic Hazard,	H412
Category 3	
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

Harmful in contact with skin. Harmful if inhaled. Harmful if swallowed. May cause respiratory irritation. Causes severe skin burns and eye damage. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP)



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	GHS05 GHS07
Signal word (CLP)	: Danger
Hazard statements (CLP)	: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled.
	H314 - Causes severe skin burns and eye damage.
	H335 - May cause respiratory irritation.
	H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	 P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
	P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. P260 - Do not breathe vapours. P310 - Immediately call a POISON CENTER or doctor.

2.3. Other hazards

Other hazards which do not result in classification : Caution! Substance is absorbed through the skin.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	2,2'-iminodiethanol (111-42-2)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	2,2'-iminodiethanol (111-42-2)

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	:	MONOETHANOLAMINE
CAS-No.	:	141-43-5
EC-No.	:	205-483-3

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-aminoethanol	CAS-No.: 141-43-5 EC-No.: 205-483-3 EC Index-No.: 603-030-00-8 REACH-no: 01-2119486455- 28	≥ 99	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412
2,2'-iminodiethanol	CAS-No.: 111-42-2 EC-No.: 203-868-0 EC Index-No.: 603-071-00-1 REACH-no: 01-2119488930- 28	≤ 0.5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Repr. 2, H361fd STOT RE 2, H373

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Specific concentration limits:		
Name	Product identifier	Specific concentration limits (%)
2-aminoethanol	CAS-No.: 141-43-5 EC-No.: 205-483-3 EC Index-No.: 603-030-00-8 REACH-no: 01-2119486455- 28	(5 ≤ C ≤ 100) STOT SE 3, H335

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

3.2. Mixtures

Not applicable

SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	 Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.
4.2. Most important symptoms and effect	ts, both acute and delayed
Symptoms/effects after inhalation	: May cause respiratory irritation. Dry/sore throat. May cause headache, nausea and irritation of respiratory tract. Risk of lung oedema.
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns. Risk of lung oedema. Abdominal pain, nausea. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination.

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

Treat symptomatically.

SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media Unsuitable extinguishing media	Water spray. Dry powder. Foam. Carbon dioxide.Do not use a heavy water stream.
5.2. Special hazards arising from the substa	ance or mixture
Fire hazard Explosion hazard Hazardous decomposition products in case of fire	 No fire hazard. No direct explosion hazard. Toxic fumes may be released. May cause flammable vapours to be released.
5.3. Advice for firefighters	
Firefighting instructions Protection during firefighting	 Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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SECTION 6: Accidental release measures		
6.1. Personal precautions, protective equip	ment and emergency procedures	
General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.	
6.1.1. For non-emergency personnel		
Protective equipment	: Wear recommended personal protective equipment.	
Emergency procedures	: Ventilate spillage area. Avoid contact with skin, eyes and clothing. Do not breathe dust/fume/gas/mist/vapours/spray.	
6.1.2. For emergency responders		
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".	
Emergency procedures	Evacuate unnecessary personnel. Stop leak if safe to do so.	

6.2. Environmental precautions

Avoid release to the environment. Prevent liquid from entering sewers, watercourses, underground or low areas. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up		
For containment	: Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.	
Methods for cleaning up	: Take up liquid spill into absorbent material. Small quantities of liquid spill: take up in non- combustible absorbent material and shovel into container for disposal. Notify authorities if product enters sewers or public waters. Collect leaking and spilled liquid in sealable containers as far as possible.	
Other information	Dispose of materials or solid residues at an authorized site.	
6.4. Reference to other sections		

For further information refer to section 13.

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Additional hazards when processed Precautions for safe handling Hygiene measures	 Not expected to present a significant hazard under anticipated conditions of normal use. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapours/spray. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
7.2. Conditions for safe storage, including a	ny incompatibilities
Technical measures Storage conditions Incompatible products Incompatible materials Storage temperature Packaging materials	 Keep in a cool, well-ventilated place away from heat. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Oxidizing agent. Strong acids. Heat sources. 20 °C Store always product in container of same material as original container. Recommended materials. high density polyethylene (HDPE). Stainless steel. Carbon steel. Glass. Do not use : Aluminium, Zinc. copper. Iron. Bronze.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

MONOETHANOLAMINE (141-43-5)		
DNEL/DMEL (additional information)		
Additional information DNEL and/or PNEC available for the componants		
PNEC (additional information)		
Additional information	DNEL and/or PNEC available for the componants	

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment. Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

Eye protection				
Type Field of application Characteristics Standard				
			EN 166	

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Skin and body protection		
Туре	Standard	
	EN 14605	

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Hand protection:

Protective gloves

Hand protection					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
					EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Respiratory protection			
Device	Filter type	Condition	Standard
	Type A - High-boiling (>65 °C) organic compounds		

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties			
9.1. Information on basic physical and chemical properties			
Physical state	: Liquid		
Colour	: Colourless.		
Appearance	: Viscous liquid.		
Odour	: Disagreeable. Ammonia. Fish.		
Odour threshold	: 2.6 – 5 ppm		
	≥ 6.5 – 12.5 mg/m³		
Melting point	: 4 °C (1013 hPa ; ASTM E737-76)		
Freezing point	: Not available		
Boiling point	: 167 °C (1013 hPa ; ASTM E737-76)		
Flammability	: Non classé comme inflammable		
	Non flammable.		
Lower explosion limit	: Not available		
Upper explosion limit	: Not available		
Flash point	: 91 °C (Coupelle fermée ; 1013 hPa ; ISO 2719)		
Auto-ignition temperature	: 424 °C		
Decomposition temperature	: Not available		
рН	: 12.1		
pH solution concentration	: 10 % (20°C)		
Viscosity, kinematic	: Not available		
Solubility	: Water: > 100 g/100ml (20°C)		
Partition coefficient n-octanol/water (Log Kow)	: -2.3 (Valeur expérimentale ; OCDE 107 ; 25 °C)		
Vapour pressure	: 0.5 hPa (20°C)		
Vapour pressure at 50°C	: 4.1 hPa		
Density	: Not available		
Relative density	: 1.02 (20 °C ; DIN 51757)		
Relative vapour density at 20°C	: 2.1		
Relative density of saturated gas/air mixture	: 1		
Particle characteristics	: Not applicable		

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9.2. Other information

9.2.1. Information with	regard to	physical	hazard	classes

No additional information available

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1) VOC content : < 1 : 100 % (directive 2010/75/UE)

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. If handled hot, use increased precautions if the temperature approaches the flash point.

10.2. Chemical stability

Instable à l'air. Absorbe de CO2 atmosphérique. Hydroscopic. Instable sous l'action de la lumière.

10.3. Possibility of hazardous reactions

Instable sous l'action de la lumière. Absorbs the atmospheric CO2. Reacts vigorously with strong oxidizers and acids.

10.4. Conditions to avoid

High temperature. Overheating. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Oxidizing agent. Strong acids. metals. Incompatible with water, humid air.

10.6. Hazardous decomposition products

Attacks many metals forming flammable/explosive gas (HYDROGEN!). Thermal decomposition generates : release of harmful/irritant gases/vapours. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined	i in Regulation (EC) No 1272/2008		
Acute toxicity (oral):Acute toxicity (dermal):Acute toxicity (inhalation):	Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled.		
2-aminoethanol (141-43-5)			
LD50 oral rat	1089 mg/kg OECD 401		
LD50 dermal rabbit	2504 mg/kg 24h- OECD 402		
LC50 Inhalation - Rat	> 1.3 mg/l 6h		
2,2'-iminodiethanol (111-42-2)			
LD50 oral rat	1600 mg/kg bodyweight (équivalent OCDE 401)		
LD50 dermal rat	12200 mg/kg (surmulot)		
LC50 Inhalation - Rat	0.2 mg/l CL0 (8h)		
Skin corrosion/irritation :	Causes severe skin burns. pH: 12.1		
Serious eye damage/irritation :	Causes serious eye damage. pH: 12.1		
Respiratory or skin sensitisation :	Not classified		
Germ cell mutagenicity :	Not classified		
Carcinogenicity :	Not classified		

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Reproductive toxicity :	Not classified
STOT-single exposure :	May cause respiratory irritation.
2-aminoethanol (141-43-5)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure :	Not classified
2,2'-iminodiethanol (111-42-2)	
NOAEL (dermal, rat/rabbit, 90 days)	32 mg/kg bodyweight/day rat 103 semaines
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard :	Not classified
11.2. Information on other hazards	

No additional information available

SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general : Hazardous to the aquatic environment, short–term : (acute) : Hazardous to the aquatic environment, long–term : (chronic) :	Harmful to aquatic life with long lasting effects. Not classified Harmful to aquatic life with long lasting effects.
2-aminoethanol (141-43-5)	
LC50 - Fish [1]	349 mg/l 96h
EC50 - Crustacea [1]	65 mg/l 48h
EC50 72h - Algae [1]	2.8 mg/l 72h - OECD 201
NOEC chronic fish	1.24 mg/l 984h - OECD 201
NOEC chronic crustacea	0.85 mg/l 504h - OECD 211
2,2'-iminodiethanol (111-42-2)	
LC50 - Fish [1]	460 mg/l 96h - oncorhynchus mykiss
EC50 - Crustacea [1]	30.1 mg/l 48h - Ceriodaphnia dubia
EC50 72h - Algae [1]	19 mg/l 72h - Pseudokirchneriella subcapitata
LOEC (acute)	1.56 mg/l 504h - Daphnia magna
NOEC chronic crustacea	0.78 mg/l 504h - Daphnia magna
12.2. Persistence and degradability	
MONOETHANOLAMINE (141-43-5)	
Persistence and degradability	Readily biodegradable.
2-aminoethanol (141-43-5)	
Persistence and degradability	Readily biodegradable.
Biodegradation	90 % 21 days
2,2'-iminodiethanol (111-42-2)	
Persistence and degradability	Readily biodegradable.
Chemical oxygen demand (COD)	1.352 g O₂/g substance

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2,2'-iminodiethanol (111-42-2)	
Biodegradation	93 % 28 j - OECD 301F
12.3. Bioaccumulative potential	
MONOETHANOLAMINE (141-43-5)	
Partition coefficient n-octanol/water (Log Kow)	-2.3 (Valeur expérimentale ; OCDE 107 ; 25 °C)
2-aminoethanol (141-43-5)	
Partition coefficient n-octanol/water (Log Kow)	-2.3
2,2'-iminodiethanol (111-42-2)	
Partition coefficient n-octanol/water (Log Kow)	-2.46 (25°C)
12.4. Mobility in soil	
MONOETHANOLAMINE (141-43-5)	
Ecology - soil	Potential for mobility in soil is high.
12.5. Results of PBT and vPvB assessment	
MONOETHANOLAMINE (141-43-5)	
This substance/mixture does not meet the PBT criteria	of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria	of REACH regulation, annex XIII
Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	2,2'-iminodiethanol (111-42-2)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	2,2'-iminodiethanol (111-42-2)
12.6. Endocrine disrupting properties	
Adverse effects on the environment caused by : endocrine disrupting properties	Not reported evidence concerning this effect.
12.7. Other adverse effects	
Other adverse effects :	May cause pH changes in aqueous ecological systems.
SECTION 13: Disposal considerations	
13.1 Wasto treatment methods	

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	 07 01 04* - other organic solvents, washing liquids and mother liquors 15 01 10* - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

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ADR	IMDG	IATA	ADN	RID	
14.1. UN number or ID number					
UN 2491	UN 2491	UN 2491	UN 2491	UN 2491	
14.2. UN proper shippin	g name	1	1	1	
ETHANOLAMINE	ETHANOLAMINE	Ethanolamine	ETHANOLAMINE	ETHANOLAMINE	
Transport document descr	iption		1	1	
UN 2491 ETHANOLAMINE, 8, III, (E)	UN 2491 ETHANOLAMINE, 8, III	UN 2491 Ethanolamine, 8, III	UN 2491 ETHANOLAMINE, 8, III	UN 2491 ETHANOLAMINE, 8, III	
14.3. Transport hazard o	class(es)		1	1	
8	8	8	8	8	
B	8	8	B	B	
14.4. Packing group	Ι		1	1	
	III	III	III	III	
14.5. Environmental haz	ards		1		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No	
No supplementary information	on available	1	1	1	
14.6. Special precaution	s for user				
Overland transport Classification code (ADR) Limited quantities (ADR) Excepted quantities (ADR) Packing instructions (ADR) Mixed packing provisions (AD Portable tank and bulk contain (ADR) Tank code (ADR) Vehicle for tank carriage Transport category (ADR) Special provisions for carriage Hazard identification number Orange plates	: C7 : 5I : E1 : PC : MI ner instructions (ADR) : T4 ner special provisions : TF : L4 : AT : 3 e - Packages (ADR) : V1 (Kemler No.) : 80 :	2 80 2491			
Tunnel restriction code (ADR) EAC code Transport by sea Special provisions (IMDG) Limited quantities (IMDG) Excepted quantities (IMDG) Packing instructions (IMDG) IBC packing instructions (IMDG) Tank instructions (IMDG) Tank special provisions (IMDG)) : E : 2X : 2X : 51 : 51 : E1 : PC : B ⁰ : T4 G) : TF	3 - 01, LP01 C03			

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EmS-No (Eire)	
EmS-No (Spillage)	* S-B
Stowage category (IMDG)	: A
Segregation (IMDG)	: SGG18. SG35
Properties and observations (IMDG)	: Colourless. Miscible with water. Corrosive to copper, copper compounds, copper alloys and rubber. Reacts violently with acids. Liquid and vapour cause burns to skin, eyes and mucous membranes.
Air transport	
PCA Excepted quantities (IATA)	: E1
PCA Limited guantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L
Inland waterway transport	
Classification code (ADN)	: C7
Limited quantities (ADN)	: 5L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: Т
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0
Rail transport	
Classification code (RID)	: C7
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 80

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(b)	MONOETHANOLAMINE ; 2-aminoethanol ; 2,2'-iminodiethanol
3(c)	MONOETHANOLAMINE ; 2-aminoethanol

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

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REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

VOC Directive (2004/42)

VOC content

: 100 % (directive 2010/75/UE)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

France

Occupational diseases		
Code	Description	
RG 49	Skin disorders caused by aliphatic, alicyclic amines or ethanolamines	
RG 49 BIS	Respiratory disorders caused by aliphatic amines, ethanolamines or isophoronediamine	
Germany		
Water hazard class (WGK)	 Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV). 	

Hazardous Incident Ordinance (12. BImSchV)	:	Is not subject to the Hazardous Incident Ordina	nce (12. Blm	SchV)
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Netherlands

Nothenando	
SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: The substance is not listed
SZW-lijst van reprotoxische stoffen –	: The substance is not listed
Vruchtbaarheid	
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed
Denmark	
Class for fire hazard	: Class III-1
Store unit	: 50 liter
Classification remarks	: Flammable according to the Danish Ministry of Justice; Emergency management guidelines
	for the storage of flammable liquids must be followed
Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product
	Pregnant/breastfeeding women working with the product must not be in direct contact with
	the product

15.2. Chemical safety assessment

A chemical safety assessment has been carried out No chemical safety assessment has been carried out

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SECTION 16: Other information		
Abbreviations and acronyms:		
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
ATE	Acute Toxicity Estimate	
BCF	Bioconcentration factor	
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
COD	Chemical oxygen demand (COD)	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC-No.	European Community number	
EC50	Median effective concentration	
EN	European Standard	
IARC	International Agency for Research on Cancer	
ΙΑΤΑ	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LC50	Median lethal concentration	
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
OEL	Occupational Exposure Limit	
РВТ	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STP	Sewage treatment plant	
ThOD	Theoretical oxygen demand (ThOD)	
TLM	Median Tolerance Limit	
VOC	Volatile Organic Compounds	
CAS-No.	Chemical Abstract Service number	
N.O.S.	Not Otherwise Specified	
vPvB	Very Persistent and Very Bioaccumulative	
ED	Endocrine disrupting properties	

Data sources

: This MSDS has been established with data of MSDS coming from upstream suppliers.

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.