Polycraft FR4 Hardener

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Revision date: 05/03/2024 Version: 13.0

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

1.1. Product identifier

Product form : Mixture
Trade name : Polycraft FR4 Hardener
Product code : QL3546

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

1.2.1. Relevant identified uses

Main use category : Industrial use,Professional use
Use of the substance/mixture : Casting compound

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

MB Fibreglass
Unit 17 & 20 Abbey Business Park
Mill Road
Newtownabbey
Co.Antrim
BT36 7EE
Tel: +44 2890 861992
Email: sales@mbfg.co.uk

1.4. Emergency telephone number

Emergency number : +44 2890 861992 (Office hours only)

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
Skin corrosion/irritation, Category 1, Sub-Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Reproductive toxicity, Category 2	H361
Specific target organ toxicity – Repeated exposure, Category 1	H372
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

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

Adverse physicochemical, human health and environmental effects

Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS05 GHS07 GHS08 GHS09

Signal word (CLP) : Danger

Contains	:	2-piperazin-1-ylethylamine; 3-aminomethyl-3,5,5-trimethylcyclohexylamine; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated]; m-phenylenebis(methylamine); Styrenated phenol
Hazard statements (CLP)	:	H302 - Harmful if swallowed. H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H361 - Suspected of damaging fertility or the unborn child. H372 - Causes damage to organs through prolonged or repeated exposure. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	:	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing, eye 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. 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. P321 - Specific treatment (see supplemental first aid instruction on this label). P391 - Collect spillage.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture contains substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Component	
Substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605	Styrenated phenol (61788-44-1)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Styrenated phenol substance identified as having endocrine disrupting properties	CAS-No.: 61788-44-1 EC-No.: 262-975-0 REACH-no: 01-2119980970-27	25 – 50	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411
3-aminomethyl-3,5,5-trimethylcyclohexylamine	CAS-No.: 2855-13-2 EC-No.: 220-666-8 EC Index-No.: 612-067-00-9 REACH-no: 01-2119514687-32	25 – 50	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 3, H412

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated]	CAS-No.: 39423-51-3 EC-No.: 500-105-6 REACH-no: 01-2119556886-20	1 – 25	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
2-piperazin-1-ylethylamine	CAS-No.: 140-31-8 EC-No.: 205-411-0 EC Index-No.: 612-105-00-4 REACH-no: 01-2119471486-30	1 – 25	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1B, H314 Skin Sens. 1, H317 Repr. 2, H361 STOT RE 1, H372 Aquatic Chronic 3, H412
m-phenylenebis(methylamine)	CAS-No.: 1477-55-0 EC-No.: 216-032-5 REACH-no: 01-2119480150-50	1 – 25	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits (%)**
3-aminomethyl-3,5,5-trimethylcyclohexylamine	CAS-No.: 2855-13-2 EC-No.: 220-666-8 EC Index-No.: 612-067-00-9 REACH-no: 01-2119514687-32	(0.001 ≤ C ≤ 100) Skin Sens. 1A, H317

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

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.
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 effects, both acute and delayed

Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

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 : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

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".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

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

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

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

No additional information available

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 symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

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	:	light yellow.
Odour	:	Amine-like.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not applicable
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available

Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	Not available
Viscosity, dynamic	:	100 – 200 mPa·s (25°C)
Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	0.94 – 0.98 g/cm³ (25°C)
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

FR4 Hardener	
ATE CLP (oral)	1167.477 mg/kg bodyweight

2-piperazin-1-ylethylamine (140-31-8)	
LD50 oral rat	2108 mg/kg Source: OECD Screening Information Data Set
LD50 dermal rabbit	886 mg/kg Source: OECD Screening Information Data Set

3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	
LD50 oral rat	1030 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:
LD50 dermal rabbit	> 1840 mg/kg

Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated] (39423-51-3)	
LD50 oral rat	550 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure), 95% CL: 123,9 - 3930
LD50 dermal rat	> 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Remarks on results: other:

m-phenylenebis(methylamine) (1477-55-0)	
LD50 oral rat	930 mg/kg Source: ECHA
LD50 oral	1180 mg/kg LD50 oral mouse
LD50 dermal rat	> 3100 mg/kg bodyweight Animal: rat, Remarks on results: other:
LD50 dermal rabbit	> 3100 mg/kg Source: ECHA
LC50 Inhalation - Rat (Dust/Mist)	1.34 mg/l/4h

Styrenated phenol (61788-44-1)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Remarks on results: other:
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:

Skin corrosion/irritation : Causes severe skin burns.

Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated] (39423-51-3)	
pH	11.6 (50g/l)

Styrenated phenol (61788-44-1)	
pH	6.85 Temp.: 30 °C Concentration: 1 vol% Remarks on result: 'other:'

Serious eye damage/irritation : Causes serious eye damage.

Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated] (39423-51-3)	
pH	11.6 (50g/l)

Styrenated phenol (61788-44-1)	
pH	6.85 Temp.: 30 °C Concentration: 1 vol% Remarks on result: 'other:'

Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : Not classified
STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

2-piperazin-1-ylethylamine (140-31-8)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	
LOAEL (oral, rat, 90 days)	160 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated] (39423-51-3)	
NOAEL (oral, rat, 90 days)	≥ 100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	> 160 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study), Remarks on results: not determinable

Styrenated phenol (61788-44-1)	
LOAEL (oral, rat, 90 days)	337 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Remarks on results: other:
NOAEL (dermal, rat/rabbit, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Aspiration hazard : Not classified

2-piperazin-1-ylethylamine (140-31-8)	
Viscosity, kinematic	14.286 mm²/s

3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	
Viscosity, kinematic	19 mm²/s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm²/s)'

Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated] (39423-51-3)	
Viscosity, kinematic	110 mm²/s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm²/s)'

m-phenylenebis(methylamine) (1477-55-0)	
Viscosity, kinematic	3.82 mm²/s (40°C)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Component	
Styrenated phenol (61788-44-1)	The substance is identified for having endocrine disrupting properties but there is no additional data available (see section 2.3)

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.

2-piperazin-1-ylethylamine (140-31-8)	
LC50 - Fish [1]	2190 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	58 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	
LC50 - Fish [1]	110 mg/l Test organisms (species): Leuciscus idus

3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	
EC50 - Crustacea [1]	17.4 mg/l
EC50 72h - Algae [1]	37 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	> 50 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
LOEC (chronic)	10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	3 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated] (39423-51-3)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	13 mg/l Test organisms (species): Daphnia magna
ErC50 algae	4.4 mg/l Selenastrum capricornutum
NOEC chronic algae	1 mg/l Selenastrum capricornutum

m-phenylenebis(methylamine) (1477-55-0)	
LC50 - Fish [1]	87.6 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	15.2 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	20.3 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	33.3 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	33.3 mg/l Source: EHCA
LOEC (chronic)	15 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	4.7 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Styrenated phenol (61788-44-1)	
EC50 - Crustacea [1]	4.6 mg/l
EC50 72h - Algae [1]	3.14 mg/l Scenedesmus subspicatus
NOEC (chronic)	0.115 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic crustacea	0.115 mg/l Daphnia magna (Water flea)

12.2. Persistence and degradability

FR4 Hardener	
Persistence and degradability	Not rapidly degradable

2-piperazin-1-ylethylamine (140-31-8)	
Persistence and degradability	Not rapidly degradable

3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)	
Persistence and degradability	Not rapidly degradable

Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated] (39423-51-3)	
Persistence and degradability	Not rapidly degradable

m-phenylenebis(methylamine) (1477-55-0)	
Persistence and degradability	Not rapidly degradable

Styrenated phenol (61788-44-1)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

2-piperazin-1-ylethylamine (140-31-8)	
Partition coefficient n-octanol/water (Log Pow)	-1.48 Source: National Institute of Technology and Evaluation

Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated] (39423-51-3)	
Partition coefficient n-octanol/water (Log Pow)	-1.13 (20°C)

m-phenylenebis(methylamine) (1477-55-0)	
Partition coefficient n-octanol/water (Log Pow)	0.18
Partition coefficient n-octanol/water (Log Kow)	0.18 (25°C)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

Component	
Styrenated phenol (61788-44-1)	The substance is identified for having endocrine disrupting properties but there is no additional data available (see section 2.3)

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

HP Code : HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.
HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.
HP8 - "Corrosive:" waste which on application can cause skin corrosion.
HP10 - "Toxic for reproduction:" waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring.
HP13 - "Sensitising:" waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.
HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 2735	UN 2735	UN 2735	UN 2735	UN 2735

ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : m-phenylenebis(methylamine) ; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated])	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : m-phenylenebis(methylamine) ; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated])	Polyamines, liquid, corrosive, n.o.s. (CONTAINS : m-phenylenebis(methylamine) ; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated])	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : m-phenylenebis(methylamine) ; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated])	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : m-phenylenebis(methylamine) ; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated])
Transport document description				
UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : m-phenylenebis(methylamine) ; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated]), 8, II, (E), ENVIRONMENTALLY HAZARDOUS	UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : m-phenylenebis(methylamine) ; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated]), 8, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 2735 Polyamines, liquid, corrosive, n.o.s. (CONTAINS : m-phenylenebis(methylamine) ; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated]), 8, II, ENVIRONMENTALLY HAZARDOUS	UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : m-phenylenebis(methylamine) ; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated]), 8, II, ENVIRONMENTALLY HAZARDOUS	UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : m-phenylenebis(methylamine) ; Propylidynetrimethanol, propoxylated, reaction products with ammonia [1 - 6.5 moles propoxylated]), 8, II, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	C7
Special provisions (ADR)	:	274
Limited quantities (ADR)	:	1l
Excepted quantities (ADR)	:	E2
Packing instructions (ADR)	:	P001, IBC02
Mixed packing provisions (ADR)	:	MP15
Portable tank and bulk container instructions (ADR)	:	T11
Portable tank and bulk container special provisions (ADR)	:	TP1, TP27
Tank code (ADR)	:	L4BN
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	2
Hazard identification number (Kemler No.)	:	80

Orange plates : 

Tunnel restriction code (ADR) : E
EAC code : 2X

Transport by sea

Special provisions (IMDG) : 274
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T11
Tank special provisions (IMDG) : TP1, TP27
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B
Stowage category (IMDG) : A
Segregation (IMDG) : SGG18, SG35
Properties and observations (IMDG) : Colourless to yellowish liquids or solutions with a pungent odour. Miscible with or soluble in water. When involved in a fire, evolve toxic gases. Corrosive to most metals, especially to copper and its alloys. Reacts violently with acids. Cause burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y840
PCA limited quantity max net quantity (IATA) : 0.5L
PCA packing instructions (IATA) : 851
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
Special provisions (IATA) : A3, A803
ERG code (IATA) : 8L

Inland waterway transport

Classification code (ADN) : C7
Special provisions (ADN) : 274
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : C7
Special provisions (RID) : 274
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02
Mixed packing provisions (RID) : MP15
Portable tank and bulk container instructions (RID) : T11
Portable tank and bulk container special provisions (RID) : TP1, TP27
Tank codes for RID tanks (RID) : L4BN
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE6
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)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

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.

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

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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

Abbreviations and acronyms:	
IARC	International Agency for Research on Cancer
IATA	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
PBT	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

Full text of H- and EUH-statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
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.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

Full text of H- and EUH-statements:	
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1

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.