

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

1.1. Product identifier

Product form : Mixture
Product name : Altro Tect / Shield Fast-track Hardener
Product code : STFC_H; TTFC_H
Product group : End product

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 : Amine Epoxy Hardener - Industrial flooring & wall coatings.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Altro Resin Systems
Unit 3 Station Road Industrial Estate
Station Road
GB- DT2 0AE Maiden Newton Dorchester
T 01300 320620
sds@altro.com - www.altro.com

Other

Altro GmbH
Ebertallee 209
06846 Dessau-Roßlau
DE
T +49 (0) 340 6500-0

1.4. Emergency telephone number

Emergency number : 01462 480480
Monday - Friday 09:00-17:00

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 (inhal.), Category 4	H332
Skin corrosion/irritation, Category 1, Sub-Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS07

Signal word (CLP) :

Danger

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Contains	: 1,3-Benzenedimethanamine; 2,2,4-Trimethylhexane-1,6-diamine; Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols; BENZYL ALCOHOL; Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia; ISOPHORONEDIAMINE / 3-Aminomethyl-3,5,5-trimethylcyclohexylamine; Reaction product of m-phenylenebis(methylamine) and 4,4'- Isopropylidenediphenol; Nitric acid, ammonium calcium salt
Hazard statements (CLP)	: H302+H332 - Harmful if swallowed or if inhaled. H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P261 - Avoid breathing spray, vapours. P264 - Wash Skin or affected areas thoroughly after handling. P280 - Wear protective clothing, eye protection, face protection, protective gloves. P301+P330+P331+P310 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER, a doctor. 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, a 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, a doctor. P312 - Call a POISON CENTER, doctor if you feel unwell. P321 - Specific treatment (see supplemental first aid instruction on this label). P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not 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 at a concentration equal to or greater than 0,1 %

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]
BENZYL ALCOHOL	CAS-No.: 100-51-6 EC-No.: 202-859-9 EC Index-No.: 603-057-00-5 REACH-no: 01-2119492630-38	$\geq 15 - < 30$	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h)
Reaction product of m-phenylenebis(methylamine) and 4,4'- Isopropylidenediphenol	CAS-No.: 113930-69-1	$\geq 15 - < 30$	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	CAS-No.: 9046-10-0 EC-No.: 618-561-0 REACH-no: 01-2119557899-12	$\geq 15 - < 30$	Skin Corr. 1, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ISOPHORONEDIAMINE / 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	≥ 10 – < 30	Acute Tox. 4 (Oral), H302 (ATE=1030 mg/kg bodyweight) Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 3, H412
ETHANOL substance with national workplace exposure limit(s) (GB)	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5	≥ 1 – < 3	Flam. Liq. 2, H225 Eye Irrit. 2, H319
Nitric acid, ammonium calcium salt	CAS-No.: 15245-12-2 EC-No.: 239-289-5	≥ 1 – < 3	Acute Tox. 4 (Oral), H302 (ATE=300 mg/kg bodyweight) Eye Dam. 1, H318
Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols	EC-No.: 701-443-9 REACH-no: 0102119980970-27-0000	≥ 1 – < 3	Skin Irrit. 2, H315 Skin Sens. 1A, H317 Aquatic Chronic 2, H411
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	EC-No.: 926-141-6 REACH-no: 01-2119456620-43	≥ 1 – < 3	Asp. Tox. 1, H304
1,3-Benzenedimethanamine	CAS-No.: 1477-55-0 EC-No.: 216-032-5 REACH-no: 01-2119480150-50	≥ 0.1 – < 3	Acute Tox. 4 (Oral), H302 (ATE=980 mg/kg bodyweight) Acute Tox. 4 (Inhalation:dust,mist), H332 (ATE=1.34 mg/l/4h) Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412
2,2,4-Trimethylhexane-1-6-diamine	CAS-No.: 25513-64-8 EC-No.: 247-063-2 REACH-no: 01-2119560598-25	< 1	Acute Tox. 4 (Oral), H302 (ATE=910 mg/kg bodyweight) Skin Corr. 1A, H314 Skin Sens. 1A, H317 Aquatic Chronic 3, H412

Specific concentration limits:

Name	Product identifier	Specific concentration limits
ISOPHORONEDIAMINE / 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

: Get medical advice/attention if you feel unwell.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

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First-aid measures after skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
First-aid measures after eye contact	: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Drink plenty of water. Go into open air and ventilate suspected area. If swallowed, seek medical advice immediately and show this container or label.

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

Symptoms/effects : Treat symptomatically.

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

No specific recommendations.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Water spray. Water fog.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Thermal decomposition can lead to the release of irritating gases and vapours.

5.3. Advice for firefighters

Firefighting instructions : Do not use water jet to extinguish. Control run-off water by containing and keeping it out of sewers and watercourses.

Protection during firefighting : Use self-contained breathing apparatus and chemically protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Do not allow to enter sewers, surface or groundwater.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb remaining liquid with sand or inert absorbent and remove to safe place. This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe vapours. Do not handle until all safety precautions have been read and understood. Keep only in original container.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use. Store in a well-ventilated place. Keep cool. Store in a dry place. Store in a closed container.

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7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

ETHANOL (64-17-5)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	380 mg/m ³
WEL TWA (OEL TWA) [2]	200 ppm

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:

Provide local exhaust or general room ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Dustproof clothing. Safety glasses.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Wear eye protection

8.2.2.2. Skin protection

Skin and body protection:

Avoid contact with skin

Hand protection:

Standard EN 374 - Protective gloves against chemicals.

Other skin protection

Materials for protective clothing:

Keep work clothing separately

8.2.2.3. Respiratory protection

Respiratory protection:

Wear suitable respiratory equipment in case of insufficient ventilation

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8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Not available
Appearance	: Colourless to pale yellow liquid.
Odour	: Amine-like.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: ≈ 120 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: No specific test data are available.
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: ≈ 1.03
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 of use.

10.3. Possibility of hazardous reactions

None under normal use.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

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10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Not relevant.

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) : Harmful if inhaled.

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ATE CLP (oral)	500 mg/kg bodyweight
ATE CLP (gases)	4500 ppmv/4h
ATE CLP (vapours)	11 mg/l/4h
ATE CLP (dust,mist)	1.5 mg/l/4h

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 5000 mg/kg bodyweight
LD50 dermal rabbit	≥ 3160 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 20 mg/l/4h

1,3-Benzenedimethanamine (1477-55-0)

LD50 oral rat	980 mg/kg
LD50 dermal rat	> 3100 mg/kg bodyweight Animal: rat
LC50 Inhalation - Rat	1.34 mg/l

2,2,4-Trimethylhexane-1-6-diamine (25513-64-8)

LD50 oral rat	910 mg/kg bodyweight Animal: rat, Animal sex: male
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Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols

LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg

BENZYL ALCOHOL (100-51-6)

LD50 oral	1580 mg/kg bodyweight Animal: mouse, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1410 - 1770
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity), Remarks on results: other:
LC50 Inhalation - Rat	> 4178 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Remarks on results: other:

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia (9046-10-0)

LD50 oral rat	2885 mg/kg similar to OECD guideline 401
LD50 dermal rabbit	2979.7 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 993,8 - 8934,1

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Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia (9046-10-0)	
LC50 Inhalation - Rat	> 0.74 mg/l 8h (IRT) no mortality was observed.
ISOPHORONEDIAMINE / 3-Aminomethyl-3-5,5-trimethylcyclohexylamine (2855-13-2)	
LD50 oral rat	1030 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 5.01 mg/l/4h
ETHANOL (64-17-5)	
LD50 oral rat	10470 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 9720 - 11380
LD50 oral	300 – 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	95.6 – 125 mg/l/4h
LC50 Inhalation - Rat (Vapours)	116.9 mg/l/4h
Nitric acid, ammonium calcium salt (15245-12-2)	
LD50 oral rat	300 – 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity), Guideline: other:
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
Skin corrosion/irritation	: Causes severe skin burns. pH: No specific test data are available.
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia (9046-10-0)	
pH	11.6 pH (concentrated solution): 11.3
ISOPHORONEDIAMINE / 3-Aminomethyl-3-5,5-trimethylcyclohexylamine (2855-13-2)	
pH	11.6
Serious eye damage/irritation	: Causes serious eye damage. pH: No specific test data are available.
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia (9046-10-0)	
pH	11.6 pH (concentrated solution): 11.3
ISOPHORONEDIAMINE / 3-Aminomethyl-3-5,5-trimethylcyclohexylamine (2855-13-2)	
pH	11.6
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
2,2,4-Trimethylhexane-1-6-diamine (25513-64-8)	
LOAEL (oral, rat, 90 days)	60 mg/kg bodyweight Animal: rat
NOAEL (oral, rat, 90 days)	10 mg/kg bodyweight Animal: rat

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BENZYL ALCOHOL (100-51-6)	
NOAEL (oral, rat, 90 days)	400 mg/kg bodyweight Animal: rat, Guideline: other:
ISOPHORONEDIAMINE / 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)
ETHANOL (64-17-5)	
LOAEL (oral, rat, 90 days)	3200 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	1730 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Remarks on results: other:

Aspiration hazard : Not classified

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	
Viscosity, kinematic	2.4 mm ² /s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm ² /s)'
BENZYL ALCOHOL (100-51-6)	
Viscosity, kinematic	0.005 mm ² /s
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia (9046-10-0)	
Viscosity, kinematic	10.9 mm ² /s
ISOPHORONEDIAMINE / 3-Aminomethyl-3-5,5-trimethylcyclohexylamine (2855-13-2)	
Viscosity, kinematic	19 mm ² /s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm ² /s)'

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

Not rapidly degradable

1,3-Benzenedimethanamine (1477-55-0)	
LC50 - Fish [1]	87.6 mg/l Test organisms (species): Oryzias latipes
LC50 - Fish [2]	10 – 100 mg/l
EC50 - Crustacea [1]	15.2 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	20.3 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	33.3 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
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'
NOEC chronic crustacea	4.7 mg/l Test species: Daphnia magna

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2,2,4-Trimethylhexane-1-6-diamine (25513-64-8)	
EC50 72h - Algae [1]	43.5 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	1.02 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	1.02 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	≥ 10.9 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '30 d'
Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols	
LC50 - Fish [1]	14.8 mg/l Fish -(LL50)
EC50 - Crustacea [1]	4.6 mg/l Test species:- Daphnia magna (Water flea), (EC50)
EC50 72h - Algae [1]	3.14 mg/l Test species:- Scenedesmus sp. (EL50)
BENZYL ALCOHOL (100-51-6)	
LC50 - Fish [1]	460 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	230 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	770 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	500 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	76828 mg/l Test organisms (species): other:
NOEC chronic fish	48897 mg/l Test organisms (species): other: Duration: '30 d'
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia (9046-10-0)	
LC50 - Fish [1]	> 15 mg/l Test organisms (species): Oncorhynchus mykiss
LC50 - Fish [2]	772.14 mg/l Test organisms (species): Cyprinodon variegatus
EC50 - Crustacea [1]	80 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	418.34 mg/l Test organisms (species): Arcatia tonsa
EC50 72h - Algae [1]	15 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	2.1 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
NOEC (chronic)	7.64 mg/l Test organisms (species):
ISOPHORONEDIAMINE / 3-Aminomethyl-3-5,5-trimethylcyclohexylamine (2855-13-2)	
LC50 - Fish [1]	110 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	23 mg/l Test organisms (species): Daphnia magna
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'
ETHANOL (64-17-5)	
LC50 - Fish [1]	13000 mg/l Test organisms (species): Oncorhynchus mykiss
EC50 - Crustacea [1]	> 10000 mg/l Test organisms (species): Daphnia magna

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ETHANOL (64-17-5)

EC50 72h - Algae [1]	275 mg/l Test organisms (species): Chlorella vulgaris
NOEC chronic crustacea	9.6 mg/l Test organisms (species): Daphnia magna
NOEC chronic algae	280 mg/l Test organisms (species): Lemna gibbous

Nitric acid, ammonium calcium salt (15245-12-2)

LC50 - Fish [1]	> 98.6 mg/l Test organisms (species): Rainbow Trout
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	490 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

Persistence and degradability	Readily biodegradable.
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BENZYL ALCOHOL (100-51-6)

Persistence and degradability	Readily biodegradable.
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Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia (9046-10-0)

Persistence and degradability	Not readily biodegradable.
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12.3. Bioaccumulative potential

No additional information available

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

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Must follow special treatment according to local regulation.

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HP Code	<p>: HP3 - "Flammable:"</p> <ul style="list-style-type: none"> – flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C; – flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air; – flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction; – flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa; – water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities; – other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste. <p>HP8 - "Corrosive:" waste which on application can cause skin corrosion.</p> <p>HP13 - "Sensitising:" waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.</p> <p>HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment</p>
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SECTION 14: Transport information

In accordance with ADR / IMDG / ADN / RID

ADR	IMDG	ADN	RID
14.1. UN number or ID number			
UN 2735	UN 2735	UN 2735	UN 2735
14.2. UN proper shipping name			
POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS(Reaction product of m-phenylenebis(methylamine) and 4,4'-Isopropylidenediphenol, ISOPHORONEDIAMINE))	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS(Reaction product of m-phenylenebis(methylamine) and 4,4'-Isopropylidenediphenol, ISOPHORONEDIAMINE))	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS(Reaction product of m-phenylenebis(methylamine) and 4,4'-Isopropylidenediphenol, ISOPHORONEDIAMINE))	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS(Reaction product of m-phenylenebis(methylamine) and 4,4'-Isopropylidenediphenol, ISOPHORONEDIAMINE))
Transport document description			
UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS(Reaction product of m-phenylenebis(methylamine) and 4,4'-Isopropylidenediphenol, ISOPHORONEDIAMINE)), 8, II, (E)	UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS(Reaction product of m-phenylenebis(methylamine) and 4,4'-Isopropylidenediphenol, ISOPHORONEDIAMINE)), 8, II	UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS(Reaction product of m-phenylenebis(methylamine) and 4,4'-Isopropylidenediphenol, ISOPHORONEDIAMINE)), 8, II	UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS(Reaction product of m-phenylenebis(methylamine) and 4,4'-Isopropylidenediphenol, ISOPHORONEDIAMINE)), 8, II
14.3. Transport hazard class(es)			
8	8	8	8
			
14.4. Packing group			
II	II	II	II

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ADR	IMDG	ADN	RID
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C7
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 1I
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.

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

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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)

Explosives Precursors Regulation (2019/1148)

Contains substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

ANNEX II REPORTABLE EXPLOSIVES PRECURSORS

List of substances on their own or in mixtures or in substances for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

Name	CAS-No.	Combined Nomenclature code (CN)	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Calcium ammonium nitrate	15245-12-2	ex 3102 60 00	ex 3824 99 96

Please see https://home-affairs.ec.europa.eu/policies/internal-security/counter-terrorism-and-radicalisation/protection/legislation-chemicals-used-home-made-explosives_en

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 additional information available

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SECTION 16: Other information

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 (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
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
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
Skin Sens. 1B	Skin sensitisation, category 1B

The classification complies with : ATP 12

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.