

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.10.2019

Version number 6

Revision: 16.10.2019

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

· 1.1 Product identifier

· Trade name: **TREMCO ES400 B**

· MSDS code: W-T-ES400B

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

No further relevant information available.

· Application of the substance / the mixture

Primer / Subcoating

Hardening agent/ Curing agent

Additional component

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

tremco illbruck Ltd

Coupland Road, Hindley Green, Wigan, WN2 4HT

Tel: +44 (0) 1942251400, Fax: +44 (0) 1942251410

msds@tremco-illbruck.com

· Further information obtainable from:

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Coupland Road, Hindley Green, Wigan, WN2 4HT

T: +44 (0) 1942251400, F: +44 (0) 1942251410

www.tremco-illbruck.co.uk, uk.info@tremco-illbruck.com

· 1.4 Emergency telephone number:

During office hours tel.: +44 (0) 1942251400. At all other times it is recommended to call NHS 111 (England/Wales/Scotland), 01 809 2166 (ROI), or otherwise to contact a doctor.

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Repr. 1B H360F May damage fertility.

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

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· Hazard pictograms

GHS05 GHS07 GHS08 GHS09

· Signal word Danger**· Contains:**

Benzyl alcohol

Bisphenol A

Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine

3-aminopropyldimethylamine

· Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H360F May damage fertility.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P201 Obtain special instructions before use.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

· Supplemental information:

EUH071 Corrosive to the respiratory tract.

Restricted to professional users.

· 2.3 Other hazards**· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures**· Description:** Mixture of substances listed below with non-hazardous additions.

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· Dangerous components:

CAS: 68919-79-9 EINECS: 272-905-0 Reg.nr.: 01-2119490750-36-xxxx (CAS 1226892-44-9)	Fatty acids, tall-oil, reaction products with triethylenetetramine Skin Corr. 1C, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	20-<30%
CAS: 186321-96-0 Reg.nr.: 01-2119983521-35-xxxx	Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Skin Sens. 1, H317	20-<30%
CAS: 100-51-6 EINECS: 202-859-9 Reg.nr.: 01-2119492630-38-xxxx	Benzyl alcohol Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2, H319	20-<30%
CAS: 80-05-7 EINECS: 201-245-8 Reg.nr.: 01-2119457856-23-xxxx	Bisphenol A Repr. 1B, H360F; Eye Dam. 1, H318; Skin Sens. 1, H317; STOT SE 3, H335	5-<10%
CAS: 109-55-7 EINECS: 203-680-9 Reg.nr.: 01-2119486842-27-xxxx	3-aminopropylidimethylamine Flam. Liq. 3, H226; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	5-<10%
CAS: 1477-55-0 EINECS: 216-032-5 Reg.nr.: 01-2119480150-50-xxxx	m-phenylenebis(methylamine) Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317; Aquatic Chronic 3, H412	5-<10%
CAS: 2855-13-2 EINECS: 220-666-8 Reg.nr.: 01-2119514687-32-xxxx	3-aminomethyl-3,5,5-trimethylcyclohexylamine Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1A, H317; Aquatic Chronic 3, H412	5-<10%
CAS: 112-24-3 EINECS: 203-950-6 Reg.nr.: 01-2119487919-13-xxxx	triethylenetetramine Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	1-<5%
CAS: 90-72-2 EINECS: 202-013-9 Reg.nr.: 01-2119560597-27-xxxx	2,4,6-tris(dimethylaminomethyl)phenol Skin Corr. 1C, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1B, H317; Aquatic Chronic 3, H412	1-<5%
CAS: 1760-24-3 EINECS: 217-164-6 Reg.nr.: 01-2119970215-39-xxxx	N-(3-(trimethoxysilyl)propyl)ethylenediamine Eye Dam. 1, H318; Skin Sens. 1, H317; Aquatic Chronic 3, H412	0.1-<1%

· SVHC

CAS: 80-05-7 | Bisphenol A

· Additional information: For the wording of the listed hazard phrases refer to section 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Take affected persons out of danger area and lay down.

After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed, in contact with skin or if inhaled.

Breathing difficulty

Allergic reactions

Causes severe skin burns and eye damage.

Information for doctor:

No further relevant information available.

Hazards

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents:

Water with full jet

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

Carbon monoxide (CO)

Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Protective equipment:

Mouth respiratory protective device.

Wear self-contained respiratory protective device.

Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Keep away from ignition sources.

- **6.2 Environmental precautions:**

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

- **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to Section 13.

Ensure adequate ventilation.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Avoid contact with the eyes and skin.

The usual precautionary measures are to be adhered to when handling chemicals.

Pregnant women should strictly avoid inhalation or skin contact.

Ensure that washing facilities are available at the work place.

Do not eat, drink, smoke or sniff while working.

- **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store only in unopened original receptacles.

- **Information about storage in one common storage facility:**

Do not store together with oxidising and acidic materials.

Protect from heat and direct sunlight.

- **Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Protect from humidity and water.

Store receptacle in a well ventilated area.

- **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

Ensure that washing facilities are available at the work place.

Pregnant women should strictly avoid inhalation or skin contact.

Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Filter A

For further guidance,

please refer to HSE HSG53 "Respiratory Protective Equipment at work - A Practical Guide".

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves

Nitrile rubber, NBR

Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Tightly sealed goggles

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· **Body protection:**

Protective work clothing

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form:	Liquid
Colour:	Yellow-brown
Odour:	Fish-like

· pH-value:	11
· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	135 °C

· Flash point:	76 °C
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· Explosive properties:	Product does not present an explosion hazard.
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· Density at 20 °C:	1.02 g/cm ³
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· Solubility in / Miscibility with water:	Slightly soluble.
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· Viscosity:	
Dynamic at 20 °C:	835 - 1100 mPas
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** Stable· **10.2 Chemical stability**· **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions** Reacts with acids, alkalis and oxidising agents.· **10.4 Conditions to avoid**

Water / moisture.

Keep away from heat.

· **10.5 Incompatible materials:** No further relevant information available.· **10.6 Hazardous decomposition products:**

Carbon monoxide

Nitrogen oxides

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed or if inhaled.

LD/LC50 values relevant for classification:

CAS: 186321-96-0 Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

CAS: 100-51-6 Benzyl alcohol

Oral	LD50	1,230 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50/8 h	1,000 ppmV (rat)

CAS: 80-05-7 Bisphenol A

Oral	LD50	3,250 mg/kg (rat)
Dermal	LD50	3,000 mg/kg (rabbit)

CAS: 109-55-7 3-aminopropyldimethylamine

Oral	LD50	1,870 mg/kg (rat)
Dermal	LD50	490 mg/kg (rabbit)

CAS: 1477-55-0 m-phenylenebis(methylamine)

Oral	LD50	1,040 mg/kg (rat)
Inhalative	LC50/4 h	2.4 mg/L (rat)

CAS: 2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine

Oral	LD50	1,000 mg/kg (rat)
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CAS: 112-24-3 triethylenetetramine

Oral	LD50	1,716 mg/kg (rat)
Dermal	LD50	1,465 mg/kg (rabbit)

CAS: 1760-24-3 N-(3-(trimethoxysilyl)propyl)ethylenediamine

Oral	LD50	>2,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	1.49-2.44 mg/L (unknown)

Primary irritant effect:

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Strong caustic effect.

Causes serious eye damage.

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- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **Additional toxicological information:**
Harmful if inhaled.
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
Corrosive to the respiratory tract.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
contains CAS 80-05-7 Bisphenol A
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity**
May damage fertility.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

CAS: 112-24-3 triethylenetetramine

LC50 (static)	330 mg/L (fish)
EC50 (static)	31.1 mg/L (daphnia magna)

CAS: 1760-24-3 N-(3-(trimethoxysilyl)propyl)ethylenediamine

LC0/96 h	344 mg/L (brachydanio rerio)
LC50/96 h	597 mg/L (brachydanio rerio)
EC50/48 h	81 mg/L (daphnia magna)
EC50/72 h	126 mg/L (scenedesmus subspicatus)
EC50/96 h	8.8 mg/L (pseudokirchneriella subcapit.)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

· Ecotoxicological effects:

CAS: 1760-24-3 N-(3-(trimethoxysilyl)propyl)ethylenediamine

NOEC	3.1 mg/L (pseudokirchneriella subcapit.)
	20 mg/L (scenedesmus subspicatus)

- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Very toxic for aquatic organisms

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Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Disposal must be made according to official regulations.

Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

- **European waste catalogue**

08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances
HP6	Acute Toxicity
HP8	Corrosive
HP10	Toxic for reproduction
HP13	Sensitising
HP14	Ecotoxic

- **Uncleaned packaging:**

- **Recommendation:**

Dispose of packaging according to regulations on the disposal of packagings.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Non contaminated packagings may be recycled.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR, IMDG, IATA**

UN2735

- **14.2 UN proper shipping name**

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· ADR	2735 AMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine), ISOPHORONEDIAMINE), ENVIRONMENTALLY HAZARDOUS
· IMDG	2735 AMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine), ISOPHORONEDIAMINE), ENVIRONMENTALLY HAZARDOUS
· IATA	AMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine), ISOPHORONEDIAMINE), MARINE POLLUTANT
· 14.3 Transport hazard class(es)	
· ADR, IMDG	
 	
· Class	8 Corrosive substances.
· Label	8
· IATA	
	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group	
· ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	
· Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Stowage Category	A
· Segregation Code	SG35 Stow "separated from" SGG1-acids
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

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· Transport/Additional information:
· ADR
· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Tunnel restriction code

E

· IMDG
· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

 UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (M-P H E N Y L E N E B I S (M E T H Y L A M I N E) ,
 ISOPHORONEDIAMINE), 8, II, ENVIRONMENTALLY
 HAZARDOUS

SECTION 15: Regulatory information

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

"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).

"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.

HSE EH40/2005 Workplace Exposure Limits (as amended)

Guidance on the classification and assessment of waste | Technical Guidance WM3 (1st edition 2015)

2001/118/EC as regards the list of wastes

2008/98/EC on waste

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 30

· National regulations:
· Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

· Other regulations, limitations and prohibitive regulations
· Substances of very high concern (SVHC) according to REACH, Article 57

CAS: 80-05-7 | Bisphenol A

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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Relevant phrases

- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- 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.
- H335 May cause respiratory irritation.
- H360F May damage fertility.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

Department issuing SDS:

Prepared and verified in accordance with "REACH" Regulation (EC) No 1907/2006, Annex II, Part A, 0.2.3.

Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 3: Flammable liquids – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Skin Corr. 1C: Skin corrosion/irritation – Category 1C
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- Skin Sens. 1A: Skin sensitisation – Category 1A
- Skin Sens. 1B: Skin sensitisation – Category 1B
- Repr. 1B: Reproductive toxicity – Category 1B
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**