Safety data sheet
according to 1907/2006/EC, Article 31

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

· **1.1 Product identifier**

· **Trade name: Castropox® 1233 Comp. B 1**

· **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** Epoxy resin hardening agent

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
· Resinas Castro S.L.
· Pol. Ind. A Granxa C/Cíes 190
· 36400 O Porriño
· Tel.: +34 669 75 48 33; +34 986 342 953
· Email: info@castrocomposites.com

· **Informing department:** see section 16
· **1.4 Emergency telephone number:**
Giftinformationszentrale Mainz - 24 Stunden Notdienst - Tel.: +49(0)6131-19240

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

Acute Tox. 4	H312 Harmful in contact with skin.
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. 2	H361 Suspected of damaging fertility or the unborn child.
STOT RE 1	H372 Causes damage to organs through prolonged or repeated exposure.

Aquatic Chronic 3 H412 Harmful 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.
· **Hazard pictograms**

GHS05 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
2-piperazin-1-ylethylamine
3-aminomethyl-3,5,5-trimethylcyclohexylamine
Polyoxypropylenediamine
Benzyl alcohol
· **Hazard statements**
H312 Harmful in contact with skin.
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.
H412 Harmful to aquatic life with long lasting effects.
· **Precautionary statements**
P260 Do not breathe dusts or mists.

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P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

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SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Epoxy resin hardening agent, formulation on aliphatic polyamine basis

· **Dangerous components:**

CAS: 140-31-8 EINECS: 205-411-0 Index number: 612-105-00-4 Reg.nr.: 01-2119471486-30-xxxx	2-piperazin-1-ylethylamine Acute Tox. 3, H311; Repr. 2, H361; STOT RE 1, H372; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1, H317; Aquatic Chronic 3, H412	25-50%
CAS: 2855-13-2 EINECS: 220-666-8 Index number: 612-067-00-9 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	25-50%
CAS: 9046-10-0 Reg.nr.: 01-2119557899-12-xxxx	Polyoxypropylenediamine Skin Corr. 1C, H314; Eye Dam. 1, H318; Aquatic Chronic 3, H412	10-25%
CAS: 100-51-6 EINECS: 202-859-9 Index number: 603-057-00-5 Reg.nr.: 01-2119492630-38-xxxx	Benzyl alcohol Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	2.5-10%
CAS: 84852-15-3 EINECS: 284-325-5 Index number: 601-053-00-8 Reg.nr.: 01-2119510715-45-xxxx	4-nonylphenol, branched Repr. 2, H361fd; Skin Corr. 1B, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=10); Acute Tox. 4, H302	≤2.5%

· **SVHC**

84852-15-3	4-nonylphenol, branched

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information** Instantly remove any clothing soiled by the product.
· **After inhalation**
Take affected persons into the open air and position comfortably
Seek medical treatment in case of complaints.
· **After skin contact**
Instantly 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 doctor.
· **After swallowing** Drink copious amounts of water and provide fresh air. Instantly call for doctor.

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· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Information for doctor** No particular measures are known - treat according to symptoms.
· **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, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **5.3 Advice for firefighters**
· **Protective equipment:** Put on breathing apparatus.
· **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures
· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.
· **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 item 13.
Ensure adequate ventilation.
· **6.4 Reference to other sections** Clean the accident area carefully.

SECTION 7: Handling and storage
· **7.1 Precautions for safe handling**
The usual precautionary measures for handling chemicals must be observed.
Ensure good ventilation/exhaustion at the workplace.
· **Information about protection against explosions and fires:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and containers:**
Store only in the original container.
Provide floor trough without outlet.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **Further information about storage conditions:** Keep container tightly sealed.
· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection
· **Additional information about design of technical systems:** No further data; see item 7.

· **8.1 Control parameters**
· **Components 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.

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· **DNELs**		
140-31-8 2-piperazin-1-ylethylamine		
Inhalative	DNEL - worker	10.6 mg/m³ (systemisch)
2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine		
Inhalative	DNEL - worker	20.1 mg/m³
100-51-6 Benzyl alcohol		
Dermal	DNEL - worker	9.5 mg/kg / bw/d (langfristig)
Inhalative	DNEL - worker	22 mg/m³ (langfristig)
84852-15-3 4-nonylphenol, branched		
Dermal	DNEL - worker	7.5 mg/kg / bw/d
Inhalative	DNEL - worker	0.5 mg/m³

· **PNECs**	
140-31-8 2-piperazin-1-ylethylamine	
PNEC (predicted no effect concentration)	0.058 mg/l (Frischwasser (freshwater)) 0.0058 mg/l (Meerwasser (seawater))
2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine	
PNEC (predicted no effect concentration)	0.06 mg/l (Frischwasser (freshwater)) 0.006 mg/l (Meerwasser (seawater))
9046-10-0 Polyoxypropylenediamine	
PNEC (predicted no effect concentration)	0.015 mg/l (Frischwasser (freshwater)) 0.0142 mg/l (Meerwasser (seawater))
100-51-6 Benzyl alcohol	
PNEC (predicted no effect concentration)	1 mg/l (Frischwasser (freshwater)) 0.1 mg/l (Meerwasser (seawater))

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment**
· **General protective and hygienic measures**
Keep away from foodstuffs, beverages and food.
Take off immediately all contaminated clothing
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
· **Breathing equipment:** Use breathing protection in case of insufficient ventilation.
· **Recommended filter device for short term use:**

Combination filter A-P2

· **Protection of hands:**

Plastic gloves

Only use chemical-protective gloves with CE-labelling of category III.
To minimise the wetness in the glove due to perspiration changing of gloves during a shift is required.
Check the permeability prior to each anewed use of the glove.
Preventive skin protection by use of skin-protecting agents is recommended.
· **Material of gloves**
Nitrile rubber, NBR
Fluorocarbon rubber (Viton)

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Recommended thickness of the material: ≥ 0.5 mm
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **As protection from splashes gloves made of the following materials are suitable:** *PVC gloves*

· **Not suitable are gloves made of the following materials:**
Leather gloves
Strong gloves

· **Eye protection:**

Tightly sealed safety glasses.

· **Body protection:** *Protective work clothing.*

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	*Fluid*
Colour:	*Blue*
· **Odour:**	*Amine-like*
· **Change in condition**	
Melting point/freezing point:	*Not determined*
Initial boiling point and boiling range:	*> 200 °C*
· **Flash point:**	*88 °C*
· **Ignition temperature:**	*240 °C*
· **Self-inflammability:**	*Product is not selfigniting.*
· **Explosive properties:**	*Product is not explosive.*
· **Critical values for explosion:**	
Lower:	*0.7 Vol %*
Upper:	*10.5 Vol %*
· **Vapour pressure at 20 °C:**	*0.1 hPa*
· **Density at 23 °C**	*0.9626 g/cm³ (ISO 2811-2)*
· **Solubility in / Miscibility with**	
Water:	*Not miscible or difficult to mix*
· **Viscosity:**	
dynamic at 25 °C:	*20 mPas (ISO 3219)*
· **9.2 Other information**	*No further relevant information available.*

SECTION 10: Stability and reactivity

· **10.1 Reactivity** *No further relevant information available.*

· **10.2 Chemical stability**

· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.

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· **10.3 Possibility of hazardous reactions** No dangerous reactions known
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** strong oxidizing agents
· **10.6 Hazardous decomposition products:**
in the event of fire:
Poisonous gases/vapours
Corrosive gases/vapours

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Harmful in contact with skin.

· **LD/LC50 values that are relevant for classification:**

140-31-8 2-piperazin-1-ylethylamine		
Oral	LD50	2097 mg/kg (rab)
		2140 mg/kg (rat)
Dermal	LD50	866 mg/kg (rab)
2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine		
Oral	LD50	1030 mg/kg (rat)
Dermal	LD50	1840 mg/kg (rab)
		>2000 mg/kg (rat)
9046-10-0 Polyoxypropylenediamine		
Oral	LD50	2885 mg/kg (rat)
Dermal	LD50	2980 mg/kg (rab)
100-51-6 Benzyl alcohol		
Oral	LD50	1040 mg/kg (mou)
		1620 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rbt)
84852-15-3 4-nonylphenol, branched		
Oral	LD50	1210 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rab)

· **Primary irritant effect:**
· **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
· **Serious eye damage/irritation**
Causes serious eye damage.
· **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **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**
Suspected of damaging fertility or the unborn child.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure**
Causes damage to organs through prolonged or repeated exposure.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
140-31-8 2-piperazin-1-ylethylamine	
Bakterientoxizität (Bacteria toxicity) (dynamic)	511 mg/l (Nitrifizierende Bakterien (nitrog.-fix.)) (EC50(2h))
Daphnientoxizität (Daphnia toxicity)	58 mg/ l (Daphnia magna (Wasserfloh)) (EC50(48h))
Algentoxizität (Algae toxicity) (static)	>1000 mg/l (Pseudokirchnerilla subcapitata) (EC50(72h))
Fischtoxizität (Fish toxicity)	2190 mg/l (Fisch (fish)) (LC50 (96h))
2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine	
Bakterien-Toxizität (Bacteria toxicity)	1120 mg/l (Pseudomonas putida) (EC10(18h))
Daphnientoxizität (Daphnia toxicity)	23 mg/ l (Daphnia magna (Wasserfloh)) (EC50(48h))
Algentoxizität (Algae toxicity)	>50 mg/l (Scenedesmus subspicatus) (ErC50(72h))
Fischtoxizität (Fish toxicity)	110 mg/l (Leuciscus idus) (LC50(96h))
9046-10-0 Polyoxypropylenediamine	
Bakterientoxizität (Bacteria toxicity) (static)	310 mg/l (Belebtschlamm (activated sludge)) (OECD 209)
Daphnientoxizität (Daphnia toxicity)	80 mg/ l (Daphnia magna (Wasserfloh)) (EC50(48h))
Algentoxizität (Algae toxicity)	15 mg/ l (Pseudokirchnerilla subcapitata) (EC50(72h))
Fischtoxizität (Fish toxicity)	> 1 5 m g / l (O c h o r h y n c u s m y k i s s (Regenbogenforelle)) (LC50(96h))
100-51-6 Benzyl alcohol	
Bakterien-Toxizität (Bacteria toxicity)	>658 mg/l (Pseudomonas putida) (EC50(16h))
	71 .42 mg/ l (Photobacterium phosphoreum) (EC50(0,5h))
	400 mg/l (Pseudomonas putida) (EC50(0,5h))
Daphnientoxizität (Daphnia toxicity)	400 mg/ l (Daphnia magna (Wasserfloh)) (EC50(24h))
Algentoxizität (Algae toxicity)	79 mg/l (Scenedesmus quadricauda) (EC50(3h))
	640 mg/l (Alge Scenedesmus sp.) (EC50(96h))
Fischtoxizität (Fish toxicity)	460 mg/l (Pimephales promelas) (LC50(96h))
	645 mg/l (Goldorfe (orfe)) (LC50(96h))
	10 mg/l (Lepomis macrochirus) (LC50 (96h))
84852-15-3 4-nonylphenol, branched	
Daphnientoxizität (Daphnia toxicity)	0 .085 mg/ l (Daphnia magna (Wasserfloh)) (EC50(48h))
Fischtoxizität (Fish toxicity)	0.128 mg/l (Pimephales promelas) (LC50(96h))

· **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.
· **Ecotoxical effects:** Not determined
· **Remark:** Harmful to fish
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

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Do not allow product to reach ground water, water bodies or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into soil.
Harmful to aquatic organisms
· **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**
For disposal,local regulations issued by the authorities must be observed.Dispose of liquid components at a suitable incineration plant. After curing, the product can be disposed of with household waste.

· **European waste catalogue**	
08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 02 00	wastes from MFSU of other coatings (including ceramic materials)
08 02 99	wastes not otherwise specified

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

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SECTION 14: Transport information

· **14.1 UN-Number**
· **ADR/RID/ADN, IMDG, IATA** UN2735

· **14.2 UN proper shipping name**
· **ADR/RID/ADN** 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (N-AMINOETHYLPIPERAZINE)
· **IMDG, IATA** AMINES, LIQUID, CORROSIVE, N.O.S. (N-AMINOETHYLPIPERAZINE)

· **14.3 Transport hazard class(es)**

· **ADR/RID/ADN**

· **Class** 8 (C7) Corrosive substances.
· **Label** 8

· **IMDG, IATA**

· **Class** 8 Corrosive substances.
· **Label** 8

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· **14.4 Packing group**	
· **ADR/RID/ADN, IMDG, IATA**	III
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Warning: Corrosive substances.
· **Kemler Number:**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	Alkalis
· **Stowage Category**	A
· **Segregation Code**	SG35 Stow "separated from" acids.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR/RID/ADN**	
· **Excepted quantities (EQ):**	E1
· **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
· **Transport category**	3
· **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. (N-AMINOETHYLPIPERAZINE), 8, III

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SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **National regulations**

VOC - EU	
<	500 g/L

· **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

84852-15-3	4-nonylphenol, branched

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

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SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
*Changes made since last issue dated 16.01.2017 at the following points: **

· **Relevant phrases**
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H361 Suspected of damaging fertility or the unborn child.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
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 data specification sheet:** Castro Composites Technical Department
· **Contact:** Alejandro Castro de la Iglesia
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
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)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
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
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Corr. 1C: Skin corrosion/irritation – Category 1C
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
Repr. 2: Reproductive toxicity – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
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.**