SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name

TUFFSTUFF Topcoat

Product code

UFI: 2W20-3048-H00X-WT8E

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

Relevant identified uses

Topcoat for roofing. Contact the manufacturer for any other applications.

Uses advised against

No information.

1.3. Details of the supplier of the safety data sheet

Supplier

Tuff Waterproofing Ltd
Address: Unit 5, First Avenue, Sherburn in Elmet, LS25 6PD, United Kingdom
Phone: +44 (0)1977 680250
E-mail: info@tuffwaterproofing.co.uk

1.4. Emergency telephone number

Emergency

+44 (0) 1977 680250

Supplier

+44 (0)1977 680250 Mon-Friday 8.00am – 4.30pm

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Flam. Liq. 3; H226 Flammable liquid and vapour.
Skin Irrit. 2; H315 Causes skin irritation.
Eye Irrit. 2; H319 Causes serious eye irritation.
STOT SE 3; H335 May cause respiratory irritation.
Repr. 2; H361d Suspected of damaging 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

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

Signal word: **Danger**

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H361d Suspected of damaging the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains phthalic anhydride; Cobalt bis(2-ethylhexanoate). May produce an allergic reaction.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243 Take action to prevent static discharges.
P260 Do not breathe vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
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.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

2.2.2. Contains:

Styrene (CAS: 100-42-5, EC: 202-851-5, Index: 601-026-00-0)

2.2.3. Special provisions

Special hazards are not known or expected.

2.3. Other hazards

No information.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

For mixtures see 3.2.

3.2. Mixtures

Name	CAS EC Index	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Conc. Limits	REACH Registration No.
Styrene	100-42-5 202-851-5 601-026-00-0	cca. 33	Flam. Liq. 3; H226 Asp. Tox. 1; H304 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Acute Tox. 4; H332 STOT SE 3; H335 Repr. 2; H361d STOT RE 1; H372 Aquatic Chronic 3; H412		01-2119457861-32
titanium dioxide	13463-67-7 236-675-5 -	cca. 11	not classified		01-2119489379-17
talc	14807-96-6 238-877-9 -	cca. 10	not classified		-
amorphous silica	112945-52-5 601-216-3 -	cca. 3	not classified		-
xylene *[C]*	1330-20-7 215-535-7 601-022-00-9	< 10	Flam. Liq. 3; H226 Asp. Tox. 1; H304 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Acute Tox. 4; H332 STOT SE 3; H335 STOT RE 2; H373 Aquatic Chronic 3; H412		01-2119488216-32
phthalic anhydride	85-44-9 201-607-5 607-009-00-4	< 1	Acute Tox. 4; H302 Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Dam. 1; H318 Resp. Sens. 1; H334 STOT SE 3; H335		01-2119457017-41
naphtha (petroleum), hydrodesulphurized heavy	64742-82-1 265-185-4 -	< 1	Flam. Liq. 3; H226 Asp. Tox. 1; H304 STOT SE 3; H336 STOT RE 1; H372 Aquatic Chronic 2; H411		01-2119490979-12
Cobalt bis(2-ethylhexanoate)	136-52-7 205-250-6 -	< 0,25	Flam. Liq. 3; H226 Acute Tox. 4; H302 Skin Sens. 1; H317 Resp. Sens. 1; H334 STOT SE 3; H336		01-2119524678-29

Notes for substances:

C	Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

General notes

Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency. When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician.
No action shall be taken involving any personal risk or without suitable training. When it is suspected, that there may still be harmful vapours/fumes present in the air, respiratory protection (mask; self contained breathing apparatus) must be used. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Use personal protective equipment. See section 8 for more information.

Following inhalation

Remove patient to fresh air - move out of dangerous area. In case of unconsciousness bring patient into stable side position and seek medical attention. Seek medical help immediately. If breathing is irregular or respiratory arrest occurs provide artificial respiration. Keep at rest in a position comfortable for breathing.

Following skin contact

Wash affected skin areas thoroughly with plenty of water and soap. Take off all contaminated clothing. If symptoms develop and persist, seek medical attention.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. If irritation persists, seek professional medical attention.

Following ingestion

Do not induce vomiting! Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Immediately consult a doctor. Show the physician the safety data sheet or label.

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

Inhalation

Can cause irritation of respiratory system.
Coughing, sneezing, nasal discharge, labored breathing.
May cause allergic respiratory reaction.
Long-term inhalation may cause severe damage to the health.

Skin contact

Irritating to the skin.
Itching, redness, pain.
May cause sensitisation by skin contact (symptoms: itching, redness, rashes).

Eye contact

Causes severe eye irritation.
Redness, tearing, pain.

Ingestion

May cause abdominal discomfort.
May cause nausea/vomiting and diarrhea.
Irritates mucous membranes in the mouth, throat, esophagus and in gastrointestinal area.

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

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Alcohol-resistant foam.
Foam.
Carbon dioxide (CO_2).

Unsuitable extinguishing media

Full water jet. Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

In case of a fire toxic gases can be generated; do not inhale gases/smoke. Vapours and air can form explosive mixtures. The vapor/gas is heavier than air and will spread along the ground. In the event of fire the following can be generated: carbon monoxide (CO), carbon dioxide (CO_2).

5.3. Advice for firefighters

Protective actions

Prolonged heating can cause an explosion. Vapours can form explosive mixtures with air. In case of fire or heating do not breathe fumes/vapours. Cool containers at risk with water spray. If possible remove containers from endangered area. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for firefighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

Additional information

Contaminated firefighting water and fire residues must be disposed of in accordance with the local regulations.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Emergency procedures

Ensure adequate ventilation. Keep away from sources of ignition and/or heat; No smoking! Take precautionary measures against static discharges. Prevent access to unprotected personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate the danger zone. Do not breathe vapour or mist. Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

During intervention, use personal protective equipment (Section 8).

6.2. Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. In case of release into the environment, inform the relevant authorities.

6.3. Methods and material for containment and cleaning up

6.3.1. For containment

Stem the spill if this does not pose risks.

6.3.2. For cleaning up

Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Clean contaminated area with plenty of water. Use spark-proof tools. Ventilate the premises. Use only explosion-proof instruments and equipment. Prevent release into the sewer, water, basements or confined areas.

6.3.3. Other information

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6.4. Reference to other sections

See also Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

7.1.1. Protective measures

Measures to prevent fire

Ensure adequate ventilation. Take precautionary measures against static discharges. Keep away from sources of ignition - no smoking. Use spark-proof tools. Vapours are heavier than air and spread along the floor. They form explosive mixtures with air. In order to avoid the risk of fires and explosions, never use compressed air when handling. Empty containers may contain flammable product residues. Do not weld, solder, drill, cut.

Measures to prevent aerosol and dust generation

Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

Measures to protect the environment

Do not discharge into drains, surface water and soil. After use immediately close container tightly.

7.1.2. Advice on general occupational hygiene

Do not eat, drink or smoke while working. Do not breathe vapours/mist. Use good personal hygiene practices – wash hands at breaks and when done working with material. Avoid contact with skin, eyes and clothes. Remove contaminated clothes and wash them before reuse. Wear suitable protective equipment; see Section 8. In case of insufficient ventilation, wear suitable respiratory protection equipment.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Technical measures and storage conditions

Protect from open fire, heat and direct sunlight. Keep away from food, drink and animal feeding stuffs. Keep away from sources of ignition - no smoking. Keep in a cool, dry and well ventilated place. Store below 30°C. Keep away from strong oxidising agents. Keep away from peroxides. Keep away from reducing agents.

7.2.2. Packaging materials

Store only in original container. Metallic GRP containers.

7.2.3. Requirements for storage rooms and vessels

Close opened containers after use. Put the containers upright to prevent from leaking. Do not store in unlabelled containers.

7.2.4. Storage class

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7.2.5. Further information on storage conditions

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7.3. Specific end use(s)

Recommendations

See identified uses in Section 1.2.

Industrial sector specific solutions

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. Occupational exposure limit values

Name (CAS)	Limit values		Short-term exposure limit		Remarks	Biological Tolerance Values
	ml/m³ (ppm)	mg/m³	ml/m³ (ppm)	mg/m³		
Phthalic anhydride (85-44-9)		4		12	Sen	
Titanium dioxide respirable (13463-67-7)		4				
Titanium dioxide total inhalable (13463-67-7)		10				
Talc, respirable dust (14807-96-6)		1				
Xylene, o-,m-,p- or mixed isomers (1330-20-7)	50	220	100	441	Sk, BMGV	650 mmol methyl hippuric acid/mol creatinine in urine - Post shift
Styrene (100-42-5)	100	430	250	1080		
Styrene (100-42-5)	50	215	100	425	India; source: Ministry of Labour and Employment	
titanium dioxide (13463-67-7)		10			TWA 8h (inhalable fraction); EH40/2005 (UK)	
titanium dioxide (13463-67-7)		4			TWA 8h (respiratory fraction); EH40/2005 (UK)	
xylene (1330-20-7)	100	435	150	655	India; source: Ministry of Labour and Employment	

8.1.2. Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 482:2012+A1:2015 Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values.

8.1.3. DNEL/DMEL values

For components

Name	Type	Exposure route	Exposure frequency	Value	Remark
Styrene (100-42-5)	Worker	inhalation	long term (systemic effects)	85 mg/m³	
Styrene (100-42-5)	Worker	inhalation	short term (systemic effects)	289 mg/m³	
Styrene (100-42-5)	Worker	inhalation	short term (local effects)	306 mg/m³	
Styrene (100-42-5)	Worker	dermal	long term (systemic effects)	406 mg/kg bw/day	
Styrene (100-42-5)	Consumer	inhalation	long term (systemic effects)	10,2 mg/m³	
Styrene (100-42-5)	Consumer	inhalation	short term (systemic effects)	174,25 mg/m³	
Styrene (100-42-5)	Consumer	inhalation	short term (local effects)	182,75 mg/m³	

Styrene (100-42-5)	Consumer	dermal	long term (systemic effects)	343 mg/kg bw/day	
Styrene (100-42-5)	Consumer	oral	long term (systemic effects)	2,1 mg/kg bw/day	
titanium dioxide (13463-67-7)	Worker	inhalation	long term (local effects)	10 mg/m³	
titanium dioxide (13463-67-7)	Consumer	oral	long term (systemic effects)	700 mg/kg bw/day	
amorphous silica (112945-52-5)	Worker	inhalation	long term (systemic effects)	4 mg/m^3	
xylene (1330-20-7)	Worker	inhalation	long term (systemic effects)	77 mg/m³	
xylene (1330-20-7)	Worker	inhalation	short term (systemic effects)	289 mg/m³	
xylene (1330-20-7)	Worker	inhalation	short term (local effects)	289 mg/m³	
xylene (1330-20-7)	Worker	dermal	long term (systemic effects)	180 mg/kg bw/day	
xylene (1330-20-7)	Consumer	inhalation	long term (systemic effects)	14,8 mg/m³	
xylene (1330-20-7)	Consumer	inhalation	short term (systemic effects)	174 mg/m³	
xylene (1330-20-7)	Consumer	inhalation	short term (local effects)	174 mg/m³	
xylene (1330-20-7)	Consumer	dermal	long term (systemic effects)	108 mg/kg bw/day	
xylene (1330-20-7)	Consumer	oral	long term (systemic effects)	1,6 mg/kg bw/day	
phthalic anhydride (85-44-9)	Consumer	oral	long term (systemic effects)	5 mg/kg bw/day	
phthalic anhydride (85-44-9)	Worker	oral	long term (systemic effects)	10 mg/kg bw/day	
phthalic anhydride (85-44-9)	Consumer	dermal	long term (systemic effects)	5 mg/kg bw/day	
phthalic anhydride (85-44-9)	Worker	dermal	long term (systemic effects)	10 mg/kg bw/day	
phthalic anhydride (85-44-9)	Consumer	inhalation	long term (systemic effects)	8,6 mg/m³	
phthalic anhydride (85-44-9)	Worker	inhalation	long term (systemic effects)	32,2 mg/m³	
naphtha (petroleum), hydrodesulphurized heavy (64742-82-1)	Worker	inhalation	long term (systemic effects)	330 mg/m³	
naphtha (petroleum), hydrodesulphurized heavy (64742-82-1)	Worker	dermal	long term (systemic effects)	44 mg/kg bw/day	
naphtha (petroleum), hydrodesulphurized heavy (64742-82-1)	Consumer	inhalation	long term (systemic effects)	71 mg/m³	
naphtha (petroleum), hydrodesulphurized heavy (64742-82-1)	Consumer	dermal	long term (systemic effects)	26 mg/kg bw/day	
naphtha (petroleum), hydrodesulphurized heavy (64742-82-1)	Consumer	oral	long term (systemic effects)	26 mg/kg bw/day	
Cobalt bis(2-ethylhexanoate) (136-52-7)	Worker	inhalation	long term (local effects)	235,1 µg/m3	
Cobalt bis(2-ethylhexanoate) (136-52-7)	Consumer	inhalation	long term (local effects)	37 µg/m3	

Cobalt bis(2-ethylhexanoate) (136-52-7)	Consumer	oral	long term (systemic effects)	55,8 µg/kg	

8.1.4. PNEC values

For components

Name	Exposure route	Value	Remark
Styrene (100-42-5)	fresh water	0,028 mg/L	
Styrene (100-42-5)	marine water	0,0028 mg/L	
Styrene (100-42-5)	water treatment plant	5 mg/L	microorganisms
Styrene (100-42-5)	fresh water sediment	0,614 mg/kg	dry weight
Styrene (100-42-5)	marine water sediment	0,0614 mg/kg	dry weight
Styrene (100-42-5)	soil	0,2 mg/kg	dry weight
Styrene (100-42-5)	water, intermittent release	0,04 mg/L	fresh water
titanium dioxide (13463-67-7)	fresh water	0,127 mg/L	
titanium dioxide (13463-67-7)	marine water	1 mg/L	
titanium dioxide (13463-67-7)	water, intermittent release	0,61 mg/L	
titanium dioxide (13463-67-7)	fresh water sediment	1000 mg / kg sediment dw	
titanium dioxide (13463-67-7)	marine water sediment	100 mg / kg sediment dw	
titanium dioxide (13463-67-7)	soil	100 mg/kg soil dw	
amorphous silica (112945-52-5)	food chain	60000 mg/kg	oral
xylene (1330-20-7)	fresh water	0,327 mg/L	
xylene (1330-20-7)	soil	2,31 mg/kg	dry weight
xylene (1330-20-7)	water, intermittent release	0,327 mg/L	fresh water
xylene (1330-20-7)	marine water	0,327 mg/L	
xylene (1330-20-7)	water treatment plant	6,58 mg/L	
xylene (1330-20-7)	fresh water sediment	12,46 mg/kg	dry weight
xylene (1330-20-7)	marine water sediment	12,46 mg/kg	dry weight
phthalic anhydride (85-44-9)	soil	0,173 mg/kg	
phthalic anhydride (85-44-9)	water treatment plant	10 mg/L	
phthalic anhydride (85-44-9)	fresh water sediment	3,8 mg/kg	
phthalic anhydride (85-44-9)	marine water sediment	0,38 mg/kg dwt	
phthalic anhydride (85-44-9)	marine water	0,1 mg/L	
phthalic anhydride (85-44-9)	fresh water	1 mg/L	
phthalic anhydride (85-44-9)	water, intermittent release	5,6 mg/L	
naphtha (petroleum), hydrodesulphurized heavy (64742-82-1)	soil	0,4 mg/kg	dry weight
Cobalt bis(2-ethylhexanoate) (136-52-7)	fresh water	0,6 µg Co/L	
Cobalt bis(2-ethylhexanoate) (136-52-7)	marine water	2,36 µg Co/L	
Cobalt bis(2-ethylhexanoate) (136-52-7)	fresh water sediment	9,5 mg Co/kg	
Cobalt bis(2-ethylhexanoate) (136-52-7)	marine water sediment	9,5 mg Co/kg	
Cobalt bis(2-ethylhexanoate) (136-52-7)	soil	10,9 mg Co/kg	
Cobalt bis(2-ethylhexanoate) (136-52-7)	water treatment plant	0,37 µg Co/L	

8.2. Exposure controls

8.2.1. Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Do not breathe vapours/aerosols. Use good personal hygiene practices – wash hands at breaks and when done working with material. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke while working. Avoid contact with skin, eyes and clothes.

Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration. Keep away from food, drink and animal feeding stuffs. The use of adequate technical equipment must always take priority over personal protective equipment.

8.2.2. Personal protective equipment

Eye and face protection

Safety glasses with side protection (EN 166). Do not use contact lenses.

Hand protection

Protective gloves (EN 374). The penetration time is determined by the protective glove manufacturer and must be observed. Observe the manufacturer's instructions regarding the use, storage, maintenance and replacement of gloves. In case of damage or at the first signs of wear and tear, change the gloves immediately. 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.

Appropriate materials

Material	Thickness	Penetration Time	Remark
Neoprene			EN 374
Nitrile			EN 374
Viton (fluorinated rubber)			EN 374
PVA			EN 374

Skin protection

At high risk of skin exposure chemical suits (EN ISO 6530:2005) and boots may be required (EN ISO 20345:2012). Protective antistatic clothing EN 1149 (1:2006, 2:1998 and 3:2004, 5:2008), protective antistatic shoes (EN 20345:2012). Clothing for protection against chemical risks, with antistatic and fireproof properties.

Respiratory protection

In case of insufficient ventilation wear suitable respiratory protection. Wear suitable protective breathing mask (EN 136) with filter A2-P2 (EN 14387). For dust/gas/ vapor concentrations above the applicable filter limit, in case of oxygen concentrations below 17% or in vague conditions, autonomous self-contained breathing apparatus should be used, according to standard EN 137, EN 138.

Thermal hazards

-

8.2.3. Environmental exposure controls

Technical measures to prevent exposure

Do not allow product to reach drains, sewage systems or ground water.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

-	**Physical state:**	liquid
-	**Colour:**	grey
-	**Odour:**	styren like

Important health, safety and environmental information

-	**pH**	No information.
-	**Melting point/freezing point**	No information.
-	**Initial boiling point/boiling range**	No information.
-	**Flash point**	31 °C
-	**Evaporation rate**	No information.
-	**Flammability (solid, gas)**	No information.
-	**Explosion limits (vol%)**	No information.
-	**Vapour pressure**	6 hPa at 20 °C
-	**Vapour density**	3,6
-	**Density**	**Density**: 1,1 – 1,4 g/cm^3 at 20 °C
-	**Solubility**	**Water**: Insoluble **Organic solvent**: Partially soluble
-	**Partition coefficient**	No information.
-	**Auto-ignition temperature**	490 °C
-	**Decomposition temperature**	No information.
-	**Viscosity**	**kinematic**: 9091 –27273 at 20 °C **Dynamic**: 10000 – 30000 mPas at 20 °C
-	**Explosive properties**	No information.
-	**Oxidising properties**	No information.

9.2. Other information

-	**Remarks:**	Flammability Limits in Air: Upper 6.1 – 6.8%; Lower 0.9 – 1.1%. Soluble in most organic solvents.

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

Temperature above flashpoint: higher fire/explosion hazard.

10.2. Chemical stability

Product is stable under normal conditions of use, recommended handling and storage conditions.

10.3. Possibility of hazardous reactions

Vapours and air can form flammable or explosive mixtures. The risk of polymerization.

10.4. Conditions to avoid

Protect from heat, direct sunlight, open fire, sparks. Extremes of temperature and direct sunlight. Take precautionary measures against static discharges.

10.5. Incompatible materials

Strong oxidising agents.
Peroxide. Reducing agents.

10.6. Hazardous decomposition products

Under normal use conditions no hazardous decomposition products are expected. In case of fire/explosion vapours/gases that pose a health hazard are released. Carbon dioxide; Carbon monoxide.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

(a) Acute toxicity

Name	Exposure route	Type	Species	Time	Value	Method	Remark
Styrene (100-42-5)	oral	LD_{50}	rat		5000 mg/kg		
Styrene (100-42-5)	dermal	LD_{50}	rat	24 h	> 2000 mg/kg bw	OECD 402	
Styrene (100-42-5)	inhalation	LC_{50}	rat	4 h	11,8 mg/l		
titanium dioxide (13463-67-7)	oral	LD_{50}	rat		> 5000 mg/kg	OECD 425	
titanium dioxide (13463-67-7)	dermal	LD_{50}	rabbit		> 10000 mg/kg		
titanium dioxide (13463-67-7)	inhalation	LC_{50}	rat	4 h	> 6,82 mg/l		
amorphous silica (112945-52-5)	dermal	LD_{50}	rabbit		> 5000 mg/kg		
amorphous silica (112945-52-5)	inhalation	LC_{50}	rat	4 h	> 0,14 mg/l	OECD 403	
xylene (1330-20-7)	oral	LD_{50}	rat		> 4000 mg/kg bw	EU B.1	
xylene (1330-20-7)	dermal	LD_{50}	rabbit		> 5000 mg/kg bw		
xylene (1330-20-7)	inhalation	LC_{50}	rat	4 h	29091 mg/m^3	EU B.2	
phthalic anhydride (85-44-9)	oral	LD_{50}	rat		1530 mg/kg bw		
phthalic anhydride (85-44-9)	dermal	LD_{50}	rabbit		> 3160 mg/kg bw		
phthalic anhydride (85-44-9)	inhalation	LC_{50}	rat	4 h	> 2,14 mg/l		
Cobalt bis(2-ethylhexanoate) (136-52-7)	oral	LD_{50}	rat		3129 mg/kg	OECD 425	

(b) Skin corrosion/irritation

Name	Species	Time	Result	Method	Remark
Styrene (100-42-5)	rabbit		Irritating.		
titanium dioxide (13463-67-7)	rabbit		Non-irritant.	OECD 404	
amorphous silica (112945-52-5)	rabbit		Non-irritant.	OECD 404	
xylene (1330-20-7)	rabbit		Mild irritating.	EU B.4	
phthalic anhydride (85-44-9)	rabbit		Irritating.	OECD 404	
Cobalt bis(2-ethylhexanoate) (136-52-7)			Non corrosive.	OECD 431	
Additional information: Causes skin irritation.					

(c) Serious eye damage/irritation

Name	Species	Time	Result	Method	Remark
Styrene (100-42-5)	rabbit		Irritating.		
titanium dioxide (13463-67-7)	rabbit		No irritant effect.	OECD 405	
amorphous silica (112945-52-5)	rabbit		No irritant effect.	OECD 405	
xylene (1330-20-7)	rabbit		Mild irritating.		
phthalic anhydride (85-44-9)	rabbit		Irritating to eyes.	Draize test	
Cobalt bis(2-ethylhexanoate) (136-52-7)			moderately irritating	OECD 437, EU B.47	
Cobalt bis(2-ethylhexanoate) (136-52-7)	rabbit		Irritating.	OECD 405	
Additional information: Causes serious eye damage.					

(d) Respiratory or skin sensitisation

Name	Exposure route	Species	Time	Result	Method	Remark
Styrene (100-42-5)	-			Non sensitising.		
titanium dioxide (13463-67-7)	dermal	mouse (female)		Non sensitising.	OECD 429	experimental value
titanium dioxide (13463-67-7)	dermal	guinea pig		Non sensitising.	OECD 406	
amorphous silica (112945-52-5)	dermal			Non sensitising.		
amorphous silica (112945-52-5)	inhalation			Non sensitising.		
xylene (1330-20-7)	dermal	mouse		Non sensitising.	OECD 429	experimental value
phthalic anhydride (85-44-9)	dermal	guinea pig		Sensitizing.	OECD 406	
phthalic anhydride (85-44-9)	inhalation	guinea pig		Sensitizing.		
Cobalt bis(2-ethylhexanoate) (136-52-7)	dermal			May cause sensitisation by skin contact.		

(e) (Germ cell) mutagenicity

Name	Type	Species	Time	Result	Method	Remark
Styrene (100-42-5)	in-vitro mutagenicity	Bacteria		Ambiguous.	OECD 471	S.typhimurium G46,TA1530, TA1535, TA100, TA98, TA1538, TA1537
Styrene (100-42-5)	in-vitro mutagenicity	Cell: Mammalian-Animal		Equivocal	OECD 476	Hamster
Styrene (100-42-5)	in-vitro mutagenicity			Positive.	OECD 473, 479	Chromosome aberration assay
Styrene (100-42-5)	in-vivo mutagenicity	mouse		Negative.	OECD 474, 486	
titanium dioxide (13463-67-7)	in-vitro mutagenicity			Negative.	OECD 471 (Bacterial Reverse Mutation Test)	Ames test
titanium dioxide (13463-67-7)	in-vitro mutagenicity	mouse		Negative.	OECD 476	experimental value
titanium dioxide (13463-67-7)	in-vitro mutagenicity	Chinese hamster ovary		Negative.	OECD 473	Chromosome aberration assay
titanium dioxide (13463-67-7)	in-vivo mutagenicity	mouse		Negative.		
amorphous silica (112945-52-5)	in-vitro mutagenicity			Negative.	OECD 471 (Bacterial Reverse Mutation Test)	Ames test
amorphous silica (112945-52-5)	in-vitro mutagenicity	Cell: Mammalian-Animal		Negative.	OECD 476	
amorphous silica (112945-52-5)	in-vitro mutagenicity			Negative.	OECD 473	Chromosome aberration assay
amorphous silica (112945-52-5)	in-vivo mutagenicity	rat		Negative.		
xylene (1330-20-7)	in-vitro mutagenicity	Chinese hamster ovary		Negative.	EU Method B.10	Chromosome aberration assay
xylene (1330-20-7)	in-vitro mutagenicity	Cell: Mammalian-Animal		Negative.	EU B.19	Hamster
xylene (1330-20-7)	in-vivo mutagenicity	mouse		Negative.	OECD 478	
phthalic anhydride (85-44-9)	in-vitro mutagenicity	S.typhimurium TA 1535, TA 1537, TA 98, TA 100 and TA102; Escherichia coli WP2 uvrA		Negative.	OECD 471	
phthalic anhydride (85-44-9)	in-vitro mutagenicity	Cell: Mammalian-Animal		Negative.	OECD 476	Hamster
phthalic anhydride (85-44-9)	in-vitro mutagenicity	hamster		Equivocal	OECD 473	Chromosome aberration assay
Cobalt bis(2-ethylhexanoate) (136-52-7)	in-vivo mutagenicity			Negative.	OECD 474	
Cobalt bis(2-ethylhexanoate) (136-52-7)	in-vivo mutagenicity			Negative.	OECD 475	

(f) Carcinogenicity

Name	Exposure route	Type	Species	Time	Value	Result	Method	Remark
Styrene (100-42-5)	inhalation	NOAEC	rat		≥ 4,34 mg/m^3 air	negative	OECD 453	
Styrene (100-42-5)	inhalation (vapours)	LOAEC	mouse (male/female)		0,09 – 0,18 mg/l	Positive	OECD 453	
Styrene (100-42-5)	oral	NOAEL	rat		≥ 2000 mg/kg bw/day	positive		
Styrene (100-42-5)	oral	LOAEL	mouse		150 mg/kg bw/day	Positive		
titanium dioxide (13463-67-7)	inhalation	NOAEC	rat		5 mg/m^3 air	negative	OECD 453	lung tumours
titanium dioxide (13463-67-7)	oral	NOEL	rat		> 50000 ppm	negative		
amorphous silica (112945-52-5)	oral	NOAEL	rat		1800-3200 mg/kg bw/day	negative	OECD 453	
xylene (1330-20-7)	oral		rats and mice		500-1000 mg/kg bw/day	negative	EU B.32	1 - 3 weeks
xylene (1330-20-7)	oral	NOAEC	rat		2171 mg/m3	negative	EPA OPPTS 870.3800	
phthalic anhydride (85-44-9)	oral	NOAEL	rat	105 weeks	1000 mg/kg bw/day	negative		
phthalic anhydride (85-44-9)	oral	NOAEL	mouse (male)	72 weeks	3570 mg/kg bw/day	negative		
phthalic anhydride (85-44-9)	oral	NOAEL	mouse (female)	72 weeks	1785 mg/kg bw/day	negative		

(g) Reproductive toxicity

Name	Reproductive toxicity type	Type	Species	Time	Value	Result	Method	Remark
Styrene (100-42-5)	Effects on fertility	NOAEL/LOAEL	rat	60 days	100 – 200 mg/kg bw/day	Positive.		Inhalation
Styrene (100-42-5)	Effects on fertility	NOAEL/LOAEL	rat	60 days	200 – 400 mg/kg bw/day	Positive.	OECD 422	oral
Styrene (100-42-5)	Reproductive toxicity	LOAEC (P, F1)	rat		2,13 mg/L	Negative.	two-generation study; OECD 416	Inhalation
Styrene (100-42-5)	Reproductive toxicity	NOAEC (P, F1)	rat		0,64 mg/L	Negative.	two-generation study; OECD 416	Inhalation
Styrene (100-42-5)	Reproductive toxicity	NOAEC (F2)	rat		0,21 mg/L	Negative.	two-generation study; OECD 416	Inhalation
Styrene (100-42-5)	Reproductive toxicity	LOAEC (F2)	rat	70 days	0,64 mg/L	Negative.	two-generation study; OECD 416	Inhalation
Styrene (100-42-5)	Maternal toxicity + developmental toxicity	NOAEC/LOAEC	rat	50 days	1,08 – 2,15 mg/L	Positive.		Inhalation
Styrene (100-42-5)	Maternal toxicity	LOAEC	rat		1,28 mg/L	Positive.	OECD 414	6-15 days; inhalation
Styrene (100-42-5)	Developmental toxicity	NOAEC	rat		≥ 2,56 mg/L	Negative.	OECD 414	6-15 days; inhalation
Styrene (100-42-5)	Maternal toxicity + developmental toxicity	NOAEC	rabbit		2,56 mg/L	Negative.	OECD	6-18 days; inhalation
amorphous silica (112945-52-5)	Reproductive toxicity	NOAEL	rat		497 mg/kg bw/day	Negative.	OECD 415	oral
amorphous silica (112945-52-5)	Teratogenicity	NOAEL	rat		1350 mg/kg bw/day	Negative.	OECD 414	oral
amorphous silica (112945-52-5)	Maternal toxicity	NOAEL	rat		1350 mg/kg bw/day	Negative.	OECD 414	oral
xylene (1330-20-7)	Developmental toxicity	NOAEC	rat		2171 mg/m³	Negative.	OECD 414	Inhalation
xylene (1330-20-7)	Teratogenicity	NOAEC	rat		8684 mg/m³	Negative.	OECD 414	Inhalation
phthalic anhydride (85-44-9)	Reproductive toxicity	NOAEL	mouse (male)	72 weeks	3570 mg/kg bw/day	Negative.		oral
phthalic anhydride (85-44-9)	Reproductive toxicity	NOAEL	mouse (female)	72 weeks	1785 mg/kg bw/day	Negative.		oral
phthalic anhydride (85-44-9)	Reproductive toxicity	NOAEL	rat (female)	105 weeks	1000 mg/kg bw/day	Negative.		oral
phthalic anhydride (85-44-9)	Maternal toxicity	NOAEL	rat		1000 mg/kg bw/day	Positive.		oral
phthalic anhydride (85-44-9)	Teratogenicity	NOAEL	rat		1700 mg/kg bw/day	Positive.		oral

Summary of evaluation of the CMR properties

Suspected of damaging the unborn child.

(h) STOT-single exposure

Name	Exposure route	Type	Species	Time	Organ	Value	Result	Method	Remark
phthalic anhydride (85-44-9)	inhalation	-					May cause respiratory irritation.		
Additional information: May cause respiratory irritation.									

(i) STOT-repeated exposure

Name	Exposure route	Type	Species	Time	Organ	Value	Result	Method	Remark
Styrene (100-42-5)	-	-			ear		Causes damage to organs through prolonged or repeated exposure.		
Styrene (100-42-5)	inhalation	NOAEC	rat (male)	28 days		3,47 mg/L air			
Styrene (100-42-5)	inhalation	NOAEC		28 days		2,13 mg/L			ototoxicity
Styrene (100-42-5)	inhalation	NOAEC	mouse	28 days		0,181 mg/L		OECD 412	
Styrene (100-42-5)	inhalation	NOAEC	rat	28 days		0,688 mg/L		OECD 412	
Styrene (100-42-5)	inhalation	NOAEC	rat	90 days	nose	0,85 mg/L			
Styrene (100-42-5)	inhalation	NOAEC	rat	90 days	overall	2,13 mg/L			
Styrene (100-42-5)	oral	NOAEL	rat			1000 mg/kg bw/day			
Styrene (100-42-5)	oral	LOAEL	rat			2000 mg/kg bw/day			
Styrene (100-42-5)	oral	NOAEL	mouse			150 mg/kg bw/day			
Styrene (100-42-5)	oral	LOAEL	mouse			300 mg/kg bw/day			
Styrene (100-42-5)	inhalation	LOAEC	rat			0,21 mg/L		OECD 453	
titanium dioxide (13463-67-7)	oral	NOEL	rat	90 days		24000 mg/kg bw/day			
titanium dioxide (13463-67-7)	inhalation	NOEC	rat			50 mg/m^3		OECD 413	
titanium dioxide (13463-67-7)	inhalation	NOEC	rat			10 mg/m^3			
amorphous silica (112945-52-5)	oral	NOAEL	rat			4000–4500 mg/kg/day		OECD 408	
amorphous silica (112945-52-5)	inhalation	NOEC	rat			1,3 mg/m^3			
amorphous silica (112945-52-5)	inhalation	NOEC	rat	90 days		< 1,3 mg/m^3		OECD 413	
amorphous silica (112945-52-5)	dermal	NOAEL	rabbit			≥ 10000 mg/kg bw/day			
xylene (1330-20-7)	oral	NOAEL	rat			250 mg/kg bw/day			

xylene (1330-20-7)	inhalation	NOAEC	rat			≥ 3515 mg/m^3			
phthalic anhydride (85-44-9)	oral	NOAEL	rat	7 weeks		1250 mg/kg bw/day			
phthalic anhydride (85-44-9)	oral	LOAEL	rat	7 weeks		2500 mg/kg bw/day			
phthalic anhydride (85-44-9)	oral	NOAEL	rat	105 weeks		500 mg/kg bw/day			
phthalic anhydride (85-44-9)	oral	LOAEL	mouse (male/female)	72 weeks		1717–2340 mg/kg bw/day			
Cobalt bis(2-ethylhexanoate) (136-52-7)	-	NOEL	rat (female)			5 mg/kg bw/day			
Cobalt bis(2-ethylhexanoate) (136-52-7)	-	NOAEL	rat (male)			40 mg/kg bw/day		OECD 422	

Additional information: Causes damage to organs through prolonged or repeated exposure.

(j) Aspiration hazard

No information.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Acute (short-term) toxicity

For components

Substance (CAS Nr.)	Type	Value	Exposure time	Species	Organism	Method	Remark
Styrene (100-42-5)	LC_{50}	4,9 mg/L	72 h	algae	*Pseudokirchneriella subcapitata*	EPA OTS 797.1050	
	EC_{50}	4,7 mg/L	48 h	crustacea	*Daphnia magna*	OECD 202	
	NOEC	1,9 mg/L		crustacea	*Daphnia magna*	OECD 202	
	LC_{50}	4,02 mg/L	96 h	fish	*Pimephales promelas*	OECD 203	
	-	500 mg/L	30 min	bacteria	Activated sludge	OECD 209	
titanium dioxide (13463-67-7)	EC_{50}	10000 mg/L	72 h	algae	*Skeletonema costatum*	ISO 10253	
	LC_{50}	2000 mg/L	48 h	crustacea	*Daphnia magna*		
	EC_{50}	> 100 mg/L	96 h	fish	*Brachydanio rerio*		
	LC_{50}	> 1000 mg/L	96 h	fish	*Fundulus heteroclitus*		
	LC0	> 1000 mg/L	48 h	fish	*Leuciscus idus*	OECD 203	
	EC_{50}	> 1000 mg/L	3 h	microorganisms			
	NOEC	≥ 1000 mg/L	3 h	microorganisms	Activated sludge	OECD 209	
	NOEC	5600 mg/L	72 h	algae	*Skeletonema costatum*	ISO 10253	
	NOEC	≥ 3 mg/L	48 h	crustacea	*Daphnia magna*	OECD 202, OECD 209	
talc (14807-96-6)	LC_{50}	100 mg/L	96 h	fish	*Danio rerio*		

amorphous silica (112945-52-5)	EC_{50}	≥ 1000 mg/L	24 h	crustacea	*Daphnia magna*	OECD 202	
	LC_{50}	> 10000 mg/L	96 h	fish	*Brachydanio rerio*	OECD 203	
xylene (1330-20-7)	EC_{50}	2,2 mg/L	73 h	algae	*Pseudokirchneriella subcapitata*	OECD 201	
	EC_{50}	> 3,4 mg/L	48 h	crustacea			
	NOEC	3,4 mg/L	48 h	crustacea	*Ceriodaphnia dubia*	US EPA 600/4-91-003	
	LC_{50}	2,6 mg/L	96 h	fish	*Oncorhynchus mykiss*		
	LC_{50}	8,4 mg/L	96 h	fish	*Oncorhynchus mykiss*	OECD 203	
	EC_{50}	96 mg/L	24 h	microorganisms	*Nitrosomonas sp.*		
	NOEC	157 mg/L	3 h	microorganisms	Activated sludge	OECD 209	
	NOEC	0,44 mg/L	73 h	algae	*Pseudokirchneriella subcapitata*	OECD 201	
phthalic anhydride (85-44-9)	NOEC	32 mg/L	72 h	algae	*Pseudokirchneriella subcapitata*	OECD 201	
	LC_{50}	> 99 mg/L	96 h	fish	*Oryzias latipes*	OECD 203	
	EC_{50}	> 1000 mg/L	3 h	microorganisms	Activated sludge	ISO 8192	
	EC_{50}	13 mg/L	16 h	microorganisms	*Pseudomonas putida*	ISO 10712	
	EC_{50}	731 mg/L		Plants	*Lactuca sativa*		
	EC_{50}	68 mg/L	72 h	algae			
	EC_{50}	71 mg/L	48 h	crustacea	*Daphnia magna*	OECD 202	
Cobalt bis(2-ethylhexanoate) (136-52-7)	EC_{50}	283,1 µg/l	72 h	algae			
	EC_{50}	654,2 µg/l	72 h	algae	*Pseudokirchneriella subcapitata*	OECD 201	

12.1.2. Chronic (long-term) toxicity

For components

Substance (CAS Nr.)	Type	Value	Exposure time	Species	Organism	Method	Remark
Styrene (100-42-5)	NOEC	1,01 mg/l	21 days	crustacea	*Daphnia magna*		
	LOEC	2,06 mg/l	21 days	crustacea	*Daphnia magna*		
	EC50	1,88 mg/l	21 days	crustacea	*Daphnia magna*	OECD 203	
	LC_{50}	120 mg/kg soil dw	14 days	earthworms	*Eisenia fetida*	OECD 207	
	LOEC	65 mg/kg soil dw		earthworms	*Eisenia fetida*	OECD 207	burrowing time and mean percent weight change
	LOEC	180 mg/kg soil dw		earthworms	*Eisenia fetida*	OECD 207	survival
	NOEC	34 mg/kg soil dw		earthworms	*Eisenia fetida*	OECD 207	mean percent weight change
xylene (1330-20-7)	NOEC	> 1,3 mg/l	56 days	fish	*Oncorhynchus mykiss*		
phthalic anhydride (85-44-9)	NOEC	16 mg/l	21 days	crustacea	*Daphnia magna*	OECD 211	
	EC50	42 mg/l	21 days	crustacea	*Daphnia magna*	OECD 211	
	LC_{50}	560 mg/l	7 days	fish	*Danio rerio*	OECD 210	
	LOEC	32 mg/l	60 days	fish			
	NOEC	10 mg/l	60 days	fish		OECD 210	
Cobalt bis(2-ethylhexanoate) (136-52-7)	NOEC/EC10	86,4 µg/L	7 days	crustacea	*Ceriodaphnia dubia*		mortality
	NOEC/EC10	19,7 –20,1 µg/L	7 days	crustacea	*Ceriodaphnia dubia*		reproduction

12.2. Persistence and degradability

12.2.1. Abiotic degradation, physical- and photo-chemical elimination

No information.

12.2.2. Biodegradation

For components

Substance (CAS Nr.)	Type	Rate	Time	Evaluation	Method	Remark
Styrene (100-42-5)	biodegradability	87 %	20 days	readily biodegradable	Similar to OECD 301D	
xylene (1330-20-7)	biodegradability	87,8 %	28 days	readily biodegradable	OECD 301F	
phthalic anhydride (85-44-9)	biodegradability	68 %	10 days	readily biodegradable	OECD 301 D	
phthalic anhydride (85-44-9)	biodegradability	74 %	30 days	readily biodegradable	OECD 301 D	
Cobalt bis(2-ethylhexanoate) (136-52-7)	biodegradability	60 %	10 days	readily biodegradable	OECD 301 D	

12.3. Bioaccumulative potential

12.3.1. Partition coefficient

For components

Substance (CAS Nr.)	Media	Value	Temperature	pH	Concentration	Method
Styrene (100-42-5)	Log Pow	3				
xylene (1330-20-7)	Log Pow	2,77 – 3,15				
phthalic anhydride (85-44-9)	Log Pow	1,6				

12.3.2. Bioconcentration factor (BCF)

For components

Substance (CAS Nr.)	species	Organism	Value	Duration	Evaluation	Method	Remark
Styrene (100-42-5)	BCF		74				Calculated value
titanium dioxide (13463-67-7)	BCF	*Oncorhynchus mykiss*	20	14 days			
xylene (1330-20-7)	BCF	*Oncorhynchus mykiss*	25,9	56 days			
phthalic anhydride (85-44-9)	BCF		3,16 –3,4				Calculated value

12.4. Mobility in soil

12.4.1. Known or predicted distribution to environmental compartments

No information.

12.4.2. Surface tension

No information.

12.4.3. Adsorption/Desorption

For components

Substance (CAS Nr.)	Type	Criterion	Value	Evaluation	Method	Remark
Styrene (100-42-5)	Soil		352			Koc
Styrene (100-42-5)	Soil	log KOC	2,55			
xylene (1330-20-7)	Soil	log KOC	2,73			
xylene (1330-20-7)	Soil		537			Koc
phthalic anhydride (85-44-9)	Soil		31			Koc

12.5. Results of PBT and vPvB assessment

No evaluation.

12.6. Other adverse effects

No information.

12.7. Additional information

For product

Harmful to aquatic organisms. May cause long term adverse effects in the aquatic environment.
Do not allow to reach ground water, water courses or sewage system.

For components

Substance: titanium dioxide

This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

Substance: amorphous silica

This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

Substance: xylene

This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

Substance: phthalic anhydride

This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product / Packaging disposal

Waste chemical

Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste. Do not allow product to reach drains/sewage systems. Dispose of in accordance with applicable waste disposal regulation.

Packaging

Uncleaned containers are classified as hazardous waste - they should be handled in the same manner as the contents. Deliver completely emptied containers to approved waste disposal authorities. Uncleaned containers should not be perforated, cut or welded. Empty containers represent a fire hazard as they may contain flammable product residues and vapour.

13.1.2. Waste treatment-relevant information

-

13.1.3. Sewage disposal-relevant information

-

13.1.4. Other disposal recommendations

-

SECTION 14. TRANSPORT INFORMATION

14.1. UN number

UN 1866

14.2. UN proper shipping name

RESIN SOLUTION

14.3. Transport hazard class(es)

3

14.4. Packing group

III

14.5. Environmental hazards

NO.

14.6. Special precautions for user

Limited quantities

5 L

Tunnel restriction code

(D/E)

IMDG flashpoint

31 °C, c.c.

IMDG EmS

F-E, S-E

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Goods may not be carried in bulk in bulk containers, containers or vehicles.

SECTION 15. REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2015/830)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

15.1.1. Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

Not applicable.

15.1.2. Special instructions

Observe the regulations on employment and protection against dangerous substances for young people, pregnant women and nursing mothers.

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Indication of changes

-

Abbreviations and acronyms

ATE - Acute Toxicity Estimate
ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CEN - European Committee for Standardisation
C&L - Classification and Labelling
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CAS# - Chemical Abstracts Service number
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
DMEL - Derived Minimal Effect Level
DNEL - Derived No Effect Level
DPD - Dangerous Preparations Directive 1999/45/EC
DSD - Dangerous Substances Directive 67/548/EEC
DU - Downstream User
EC - European Community
ECHA - European Chemicals Agency
EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)

EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
EEC - European Economic Community
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre
Kow - octanol-water partition coefficient
LC_{50} - Lethal Concentration to 50 % of a test population
LD_{50} - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see http://ec.europa.eu/environment/waste/framework/list.htm)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

Key literature references and sources for data

Safety Data Sheet, Cure It Topcoat, G& B Northwest Ltd, Revision Date: 6th December 2018, Version: 1.2.

List of relevant H phrases

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
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.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure .
H373 May cause 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.

The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under Section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.