SAFETY DATA SHEET ACCORDING TO REGULATION (EC) 1907/2006

Product name: Cure It Resin

Creation date: 19.06.2019, Revision: 02.03.2023, version: 11.1

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

1.1 Product identifier

Product name
Cure It Resin

UFI:
A300-D0C5-E00M-2J19

https://my.chemius.net/p/iHq6YJ/en/pd/e4

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

Relevant identified uses
Resin 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
G&B Northwest Ltd
Giants Hall Farm
WN6 8RY Wigan, United Kingdom
+44 (0)1942 518150
enquiries@gandbnw.co.uk

1.4 Emergency Telephone Number

Emergency
112

Supplier
+44 (0)1942 518150 Mon-Friday 8.30am – 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

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. 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.

Contains:
styrene

2.3 Other hazards

PBT/vPvB
No information.

Endocrine disrupting properties
No information.

Additional information
No information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

For mixtures see 3.2.

3.2 Mixtures

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Conc. Limits	Notes for substances
styrene	100-42-5 202-851-5 601-026-00-0 01-2119457861-32	cca. 37	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	/	/
silicon dioxide, amorphous	7631-86-9 231-545-4 - 01-2119379499-16	> 1	/	/	/

phthalic anhydride	85-44-9 201-607-5 607-009-00-4 01-2119457017-41	<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	/	/
2,2,4,6,6-pentamethylheptane	13475-82-6 236-757-0 - 01-2119490725-29	cca. 0,3	Flam. Liq. 3; H226 Asp. Tox. 1; H304 Aquatic Chronic 4; H413 EUH066	/	/
Naphtha (petroleum), hydrodesulfurized heavy (benzene < 0.1 % w/w)	64742-82-1 265-185-4 - 01-2119490979-12	cca. 0,1	Flam. Liq. 3; H226 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 STOT RE 1; H372 Aquatic Chronic 2; H411	/	P

Notes for substances

P	The harmonised classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 shall apply.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes

When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician. Do not breathe dust/fume/gas/mist/vapors/spray. Use personal protective equipment. See section 8 for more information.

Following inhalation

Remove patient to fresh air - move out of dangerous area. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Obtain professional medical help!

Following skin contact

Take off all contaminated clothing. Wash affected skin areas thoroughly with plenty of water and soap. 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. Consult a physician. Show the physician the safety data sheet or label. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation

Coughing, sneezing, nasal discharge, labored breathing. Can cause irritation of respiratory system. Harmful.

Following skin contact

Itching, redness, pain.

Following eye contact

Redness, tearing, pain.

Following 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

No information.

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.
Fire extinguishing powder.
Carbon dioxide (CO_2).

Unsuitable extinguishing media

Full water jet.

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.
Carbon monoxide (CO).

5.3 Advice for firefighters

Protective actions

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

Special protective equipment for fire-fighters

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

For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Precautionary measures

Ensure adequate ventilation. Keep away from sources of ignition and/or heat; No smoking! Take precautionary measures against static discharges.

Emergency procedures

Evacuate the danger zone. No action shall be taken involving any personal risk or without suitable training. Prevent access to unprotected personnel. Do not breathe vapour or mist. Avoid contact with skin, eyes and clothing. In the event of fire and/or explosion do not breathe fumes.

For emergency responders

Use personal protective equipment.

6.2 Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. If accidental large entry into water or ground occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

For containment

Stem the spill if this does not pose risks.

For cleaning up

Prevent release into the sewer, water, basements or confined areas. Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Make sure the leakage site is well aired. Use spark-proof tools. Dispose in accordance with applicable regulations (see Section 13).

OTHER INFORMATION

See Section 12: ECOLOGICAL INFORMATION.

6.4 Reference to other sections

See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures

Measures to prevent fire

Ensure adequate ventilation. Take precautionary measures against static discharges. Ensure proper grounding of the equipment. 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 or explosive vapours.

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.

Other measures

No information.

Advice on general occupational hygiene

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Do not breathe vapours/mist. 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. Avoid exposure - obtain special instructions before using. Refer to instructions on label and regulations for safety and health at work. Regular cleaning of equipment, work area and clothing is recommended.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Store in accordance with local regulations. Keep in a cool, dry and well ventilated place. Store below 30°C. Keep away from heat and sources of ignition. Keep away from food, drink and animal feeding stuffs. Keep away from strong oxidising agents. Keep away from peroxides. Keep away from reducing agents.

Packaging materials

Metallic GRP containers.

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. The empty containers contain the residues of the preparation and therefore can also pose a risk.

Storage class

No information.

Further information on storage conditions

No information.

7.3 Specific end use(s)

Recommendations

Roofing resin.

Industrial sector specific solutions

No information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

Name	mg/m³	ml/m³	Short-term value mg/m³	Short-term value ml/m³	Remark	Biological Tolerance Values
styrene	215	50	425	100	India; source: Ministry of Labour and Employment, Permissible Levels of Certain Chemical substances in work environment	/
Styrene (100-42-5)	430	100	1080	250	/	/
Phthalic anhydride (85-44-9)	4	/	12	/	Sen	/

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 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values

For product

No information.

For components

Name	Type	Exposure route	exp. frequency	Remark	value
styrene	Worker	inhalation	long term systemic effects	/	85 mg/m³
styrene	Worker	inhalation	short term systemic effects	/	289 mg/m³
styrene	Worker	inhalation	short term local effects	/	306 mg/m³
styrene	Worker	dermal	long term systemic effects	/	406 mg/kg bw/day
styrene	Consumer	inhalation	long term systemic effects	/	10.2 mg/m³
styrene	Consumer	inhalation	short term systemic effects	/	174.25 mg/m³
styrene	Consumer	inhalation	long term local effects	/	182.75 mg/m³
styrene	Consumer	dermal	long term systemic effects	/	343 mg/kg bw/day
styrene	Consumer	oral	long term systemic effects	/	2.1 mg/kg bw/day

PNEC values

For product

No information.

For components

Name	Exposure route	Remark	value
styrene	fresh water	/	0.028 mg/L
styrene	water, intermittent release	fresh water	0.04 mg/L
styrene	marine water	/	0.014 mg/L
styrene	water treatment plant	/	5 mg/L
styrene	fresh water sediment	dry weight	0.614 mg/kg
styrene	marine water sediment	dry weight	0.307 mg/kg
styrene	soil	dry weight	0.2 mg/kg

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Handle in accordance with good industrial hygiene and safety practice. Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not breathe vapours/aerosols. Do not eat, drink or smoke while working. Avoid contact with skin, eyes and clothes. Appropriate technical measures to reduce exposure of workers must be chosen depending on the specific use of the product and the resulting risk of exposure at the workplace.

Structural measures to prevent exposure

No information.

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.

Personal protective equipment

Eye and face protection

Safety glasses with side protection (EN 166).

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	/	/	/
Nitrile	/	/	/
Viton (fluorinated rubber)	/	/	/
PVA	/	/	/

Skin protection

Protective antistatic clothing EN 1149 (1:2006, 2:1998 and 3:2004, 5:2008), protective antistatic shoes (EN 20345:2012). Wear fire/flame resistant/retardant clothing. BS EN ISO 11612:2015 - Protective clothing – Clothing to protect against heat and flame. Standard EN ISO 14116 - Limited flame spread materials

Respiratory protection

In case of insufficient ventilation wear suitable respiratory protection. Protective masks (EN 136) or half masks (EN 140) with filter A (EN 14387). In case of dust formation wear appropriate protective mask - mask with particle filter. Wear suitable protective breathing mask (EN 136) with filter A2-P2 (EN 14387).

Thermal hazards

No information.

Environmental exposure controls

Substance/mixture related measures to prevent exposure

No information.

Instruction measures to prevent exposure

No information.

Organisational measures to prevent exposure

No information.

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

green blue according to specification

Odour

styren like

Important health, safety and environmental information

Odour threshold	No information.
Melting point/Freezing point	No information.
Boiling point or initial boiling point and boiling range	No information.
Flammability	No information.
Lower and upper explosion limit	0.9 — 6.8 vol %
Flash point	31 °C
Auto-ignition temperature	490 °C
Decomposition temperature	No information.
pH	No information.
Viscosity	kinematic: 209 — 245 mm^2/s at 25 °C Dynamic: 230 — 270 mPas at 25 °C
Solubility	Water: Insoluble
Partition coefficient	No information.
Vapour pressure	6 hPa at 20 °C
Density and/or relative density	Density: 1.11 — 1.15 g/cm^3 at 20 °C
Relative vapour density	3.6
Particle characteristics	No information.

9.2 OTHER INFORMATION

Explosive properties	No information.

Other information

Soluble in most organic solvents. Solubility in other solvents: Medium Phthalates.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Product may ignite and burn at temperatures exceeding the flash point.

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. Exposure to light. 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 hazard classes as defined in Regulation (EC) No 1272/2008

(a) Acute toxicity

For components

Name	Exposure route	Type	Species	Time	value	Method	Remark
styrene	oral	LD_{50}	rat	/	5000 mg/kg	/	/
styrene	dermal	LD_{50}	rat	24 h	> 2000 mg/kg bw	OECD 402	/
styrene	inhalation	LC_{50}	rat	4 h	11.8 mg/l	/	/
silicon dioxide, amorphous	oral	LD_{50}	rat	/	> 5000 mg/kg bw	OECD 401	/
silicon dioxide, amorphous	dermal	LD_{50}	rabbit	/	> 5000 mg/kg	/	/
silicon dioxide, amorphous	inhalation	LC_{50}	rat	4 h	> 0.14 mg/l	OECD 403	/
phthalic anhydride	oral	LD_{50}	rat	/	1530 mg/kg bw	/	/
phthalic anhydride	dermal	LD_{50}	rabbit	/	> 3160 mg/kg bw	/	/
phthalic anhydride	inhalation	LC_{50}	rat	4 h	> 2.14 mg/l	/	/
2,2,4,6,6-pentamethylheptane	oral	LD_{50}	rat	/	> 5000 mg/kg bw	OECD 401	/
2,2,4,6,6-pentamethylheptane	dermal	LD_{50}	rabbit	/	≥ 3160 mg/kg bw	/	/
2,2,4,6,6-pentamethylheptane	inhalation	LC_{50}	rat	4 h	> 4.95 mg/l	Equivalent to OECD 403 Equivalent to OECD 403	/

(b) Skin corrosion/irritation

For components

Name	Species	Time	result	Method	Remark
styrene	rabbit	/	Irritating.	/	/
silicon dioxide, amorphous	rabbit	/	Non-irritant.	OECD 404	/
phthalic anhydride	rabbit	/	Irritating.	OECD 404	/

2,2,4,6,6-pentamethylheptane	rabbit	/	Non-irritant.	Equivalent to OECD 404	/

Additional information

Causes skin irritation.

(c) Serious eye damage/irritation

For components

Name	Exposure route	Species	Time	result	Method	Remark
styrene	/	rabbit	/	Irritating.	/	/
silicon dioxide, amorphous	/	rabbit	/	No irritant effect.	OECD 405	/
phthalic anhydride	/	rabbit	/	Irritating to eyes.	Draize test	/
2,2,4,6,6-pentamethylheptane	/	rabbit	/	No irritant effect.	OECD 405	/

Additional information

Causes serious eye irritation.

(d) Respiratory or skin sensitisation

For components

Name	Exposure route	Species	Time	result	Method	Remark
styrene	dermal	/	/	Non sensitising.	/	/
styrene	inhalation	/	/	Non sensitising.	/	/
silicon dioxide, amorphous	-	/	/	Non sensitising.	/	/
phthalic anhydride	dermal	guinea pig	/	Sensitizing.	OECD 406	/
phthalic anhydride	inhalation	guinea pig	/	Sensitizing.	/	/
2,2,4,6,6-pentamethylheptane	dermal	guinea pig	/	Negative.	OECD 406	/

Additional information

The product is not classified as sensitising. It contains at least one ingredient that can cause sensitisation. Can cause allergic reaction.

(e) (Germ cell) mutagenicity

For components

Name	Type	Species	Time	result	Method	Remark
styrene	in-vitro mutagenicity	Salmonella typhimurium	/	Equivocal	OECD 471	/
styrene	in-vitro mutagenicity	Cell: Mammalian-Animal	/	Equivocal	OECD 476	/
styrene	in-vitro mutagenicity	mammalian cytogenetic test	/	Positive.	OECD 473, 479	Chromosome aberration assay
styrene	in-vivo mutagenicity	mouse	/	Negative.	OECD 474, 486	/
silicon dioxide, amorphous	/	Bacteria	/	Negative.	OECD 471 (Bacterial Reverse Mutation Test)	Ames test
silicon dioxide, amorphous	in-vitro mutagenicity	Cell: Mammalian-Animal	/	Negative.	OECD 476	/
silicon dioxide, amorphous	in-vitro mutagenicity	/	/	Negative.	OECD 473	Chromosome aberration assay
silicon dioxide, amorphous	in-vivo mutagenicity	rat	/	Negative.	/	/
phthalic anhydride	in-vitro mutagenicity	Cell: Mammalian-Animal	/	Negative.	OECD 476	/
phthalic anhydride	in-vitro mutagenicity	Salmonella typhimurium	/	Negative.	OECD 471	/
phthalic anhydride	in-vitro mutagenicity	mammalian cytogenetic test	/	Equivocal	OECD 473	Chromosome aberration assay

2,2,4,6,6-pentamethylheptane	in-vitro mutagenicity	S. typhimurium, other: S. typhimurium TA1535, TA1537, TA98, TA100 and TA1538	/	Negative.	Equivalent to OECD 471	/
2,2,4,6,6-pentamethylheptane	in-vitro mutagenicity	Mammalian cells - hamster	/	Negative.	Equivalent to OECD 476	/
2,2,4,6,6-pentamethylheptane	in-vitro mutagenicity	/	/	Negative.	Equivalent to OECD 473	Chromosome aberration assay
2,2,4,6,6-pentamethylheptane	in-vivo mutagenicity	mouse	/	Negative.	Equivalent to OECD 474	/

(f) Carcinogenicity

For components

Name	Exposure route	Type	Species	Time	value	result	Method	Remark
styrene	inhalation (vapours)	NOAEL	rat	/	≥ 4.34 mg/l	negative	OECD 453	/
styrene	inhalation (vapours)	NOAEC	mouse (male)	/	0.09 mg/l	/	OECD 453	/
styrene	inhalation (vapours)	LOAEC	mouse (male/female)	/	0.09 - 0.18 mg/l	Positive	OECD 453	/
styrene	oral	NOAEL	rat	/	≥ 2000 mg/kg bw/day	/	/	/
styrene	oral	LOAEL	mouse	/	150 mg/kg bw/day	Positive	/	/
silicon dioxide, amorphous	oral	NOAEL	rat	/	1800 - 32000 mg/kg bw/day	No effect	OECD 453	/
phthalic anhydride	oral	NOAEL	rat	105 weeks	1000 mg/kg bw/day	negative	/	/
phthalic anhydride	oral	NOAEL	mouse (male)	72 weeks	3570 mg/kg bw/day	negative	/	/
phthalic anhydride	oral	NOAEL	mouse (female)	72 weeks	1785 mg/kg bw/day	negative	/	/

(g) Reproductive toxicity

For components

Name	Reproductive toxicity type	Type	Species	Time	value	result	Method	Remark
styrene	Maternal toxicity + developmental toxicity	NOAEC/LOAEC	rat	50 days	1.08 - 2.15 mg/L	Positive.	/	Inhalation
styrene	Maternal toxicity	LOAEC	rat	/	1.28 mg/L	Positive.	OECD 414	6-15 days; inhalation
styrene	Developmental toxicity	NOAEC	rat	/	≥ 2.56 mg/L	Negative.	OECD 414	6-15 days; inhalation
styrene	Maternal toxicity + developmental toxicity	NOAEC	rabbit	/	2.56 mg/L	Negative.	OECD	6-18 days; inhalation
styrene	Effects on fertility	NOAEL/LOAEL	rat	60 days	100 - 200 mg/kg bw/day	Positive.	/	Inhalation
styrene	Effects on fertility	NOAEL/LOAEL	rat	60 days	200 - 400 mg/kg bw/day	Positive.	OECD 422	oral
styrene	Reproductive toxicity	NOAEC (P/F1)	rat	/	0 mg/L	/	two-generation study; OECD 416	Inhalation
styrene	Reproductive toxicity	LOAEC (P, F1)	rat	/	2.13 mg/L	/	two-generation study; OECD 416	Inhalation
styrene	Reproductive toxicity	NOAEC (F2)	rat	/	0.21 mg/L	/	two-generation study; OECD 416	Inhalation

styrene	Reproductive toxicity	LOAEC (F2)	rat	70 days	0.64 mg/L	/	two-generation study; OECD 416	Inhalation
silicon dioxide, amorphous	Effects on fertility	NOAEL	rat	/	497 mg/kg bw/day	Negative.	OECD 415	oral
silicon dioxide, amorphous	Maternal toxicity	NOAEL	rat	/	1350 mg/kg bw/day	/	OECD 414	oral
phthalic anhydride	Reproductive toxicity	NOAEL	mouse (male)	72 weeks	3570 mg/kg bw/day	Negative.	/	oral
phthalic anhydride	Reproductive toxicity	NOAEL	mouse (female)	72 weeks	1785 mg/kg bw/day	Negative.	/	oral
phthalic anhydride	Reproductive toxicity	NOAEL	rat (female)	105 weeks	1000 mg/kg bw/day	/	/	oral
phthalic anhydride	Maternal toxicity	NOAEL	rat	/	1000 mg/kg bw/day	/	/	oral
phthalic anhydride	Teratogenicity	NOAEL	rat	/	1700 mg/kg bw/day	/	/	oral
2,2,4,6,6-pentamethylheptane	oral	NOAEL	rat	/	≥ 1000 mg/kg bw/day	Negative.	Equivalent to OECD 422	P/F1
2,2,4,6,6-pentamethylheptane	Developmental toxicity	NOAEL	rat (female)	15 days	≥ 5220 mg/m³	Negative.	Equivalent to OECD 414	/

Summary of evaluation of the CMR properties

Suspected of damaging the unborn child.

(h) STOT-single exposure

For components

Name	Exposure route	Type	Species	Time	Exposure	organ	value	result	Method	Remark
phthalic anhydride	inhalation	-	/	/	/	/	/	May cause respiratory irritation.	/	/

Additional information

May cause respiratory irritation.

(i) STOT-repeated exposure

For components

Name	Exposure route	Type	Species	Time	Exposure	organ	value	result	Method	Remark
styrene	inhalation	-	rat (male)	28 days	/	Central nervous system, hearing organs	3.47 mg/L	Causes damage to organs through prolonged or repeated exposure.	/	/
styrene	inhalation	NOAEC	/	28 days	/	/	2.13 mg/L	/	/	ototoxicity
styrene	inhalation	NOAEC	mouse	28 days	/	/	0.181 mg/L	/	OECD 412	/
styrene	inhalation	NOAEC	rat	28 days	/	/	0.688 mg/L	/	OECD 412	/
styrene	inhalation	NOAEC	rat	90 days	/	nose	0.85 mg/L	/	/	/
styrene	inhalation	NOAEC	rat	90 days	/	overall	2.13 mg/L	/	/	/
styrene	oral	NOAEL	rat	/	/	/	1000 mg/kg bw/day	/	/	/
styrene	oral	LOAEL	rat	/	/	/	2000 mg/kg bw/day	/	/	/
styrene	oral	NOAEL	mouse	/	/	/	150 mg/kg bw/day	/	/	/
styrene	oral	LOAEL	mouse	/	/	/	300 mg/kg bw/day	/	/	/
styrene	inhalation	LOAEC	rat	/	/	/	0.21 mg/L	/	OECD 453	/

silicon dioxide, amorphous	oral	NOEL	rat	90 days	chronic	/	4000 - 4500 mg/kg/day	/	OECD 408	/
silicon dioxide, amorphous	inhalation	NOEC	rat	90 days	/	/	1.3 mg/m^3	/	OECD 413	/
silicon dioxide, amorphous	dermal	NOAEL	rabbit	/	/	/	≥ 1000 mg/kg bw/day	/	/	/
phthalic anhydride	oral	NOAEL	rat	7 weeks	/	/	1250 mg/kg bw/day	/	/	/
phthalic anhydride	oral	LOAEL	rat	7 weeks	/	/	2500 mg/kg bw/day	/	/	/
phthalic anhydride	oral	NOAEL	rat	105 weeks	/	/	500 mg/kg bw/day	/	/	/
phthalic anhydride	oral	LOAEL	mouse (male/female)	72 weeks	/	/	1717 - 2340 mg/kg bw/day	/	/	/
2,2,4,6,6-pentamethylheptane	inhalation	NOAEC	mouse	17 days	/	/	≥ 400 ppm	/	Equivalent to OECD 412	/
2,2,4,6,6-pentamethylheptane	oral	NOAEL	rat	13 weeks	/	/	≥ 1000 mg/kg	/	Equivalent to OECD 408	/
2,2,4,6,6-pentamethylheptane	inhalation	NOAEL	rat	13 weeks	/	/	≥ 1.16 mg/m^3	/	OECD 413	/
2,2,4,6,6-pentamethylheptane	inhalation	NOAEC	rat	105 weeks	/	/	≥ 400 ppm	/	/	/
2,2,4,6,6-pentamethylheptane	inhalation	NOAEC	rat	105 weeks	/	/	25 ppm	/	Equivalent to OECD 453	/

Additional information

Causes damage to organs through prolonged or repeated exposure.

(j) Aspiration hazard

No information.

Additional information

Aspiration hazard: Not classified.

Symptoms related to the physical, chemical and toxicological characteristics

No information.

Interactive effects

No information.

11.2 Information on other hazards

Endocrine disrupting properties

No information.

Other information

No information.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute (short-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
styrene	LC_{50}	4.9 mg/L	72 h	algae	*Pseudokirchneriella subcapitata*	EPA OTS 797.1050	/
styrene	EC_{50}	4.7 mg/L	48 h	crustacea	*Daphnia magna*	OECD 202	/
styrene	NOEC	1.9 mg/L	48 h	crustacea	*Daphnia magna*	OECD 202 OECD 202	/
styrene	EC_{50}	500 mg/L	30 min	activated sludge	/	OECD 209	/
styrene	LC_{50}	4.02 mg/L	96 h	fish	*Pimephales promelas*	OECD 203 OECD 203	/
silicon dioxide, amorphous	EL_{50}	≥ 1000 mg/L	24 h	crustacea	*Daphnia magna*	OECD 202 OECD 202	/
silicon dioxide, amorphous	LC_{50}	> 10000 mg/L	96 h	fish	*Danio rerio*	OECD 203	/
phthalic anhydride	EC_{50}	68 mg/L	72 h	algae	*Pseudokirchneriella subcapitata*	OECD 201	/
phthalic anhydride	NOEC	32 mg/L	72 h	algae	*Pseudokirchneriella subcapitata*	OECD 201 OECD 201	/
phthalic anhydride	EC_{50}	71 mg/L	48 h	crustacea	*Daphnia magna*	OECD 202	/
phthalic anhydride	LC_{50}	> 99 mg/L	96 h	fish	*Oryzias latipes*	OECD 203 OECD 203	/
phthalic anhydride	EC_{50}	> 1000 mg/L	3 h	microorganisms	Activated sludge	ISO 8192 ISO 8192	/
phthalic anhydride	EC_{50}	13 mg/L	16 h	microorganisms	*Pseudomonas putida*	ISO 10712 ISO 10712	/
phthalic anhydride	EC_{50}	731 mg/L	/	Plants	*Lactuca sativa*	/	/
2,2,4,6,6-pentamethylheptane	EC_{50}	> 22.5 mg/L	72 h	algae	*Desmodesmus subspicatus*	OECD 201	/
2,2,4,6,6-pentamethylheptane	EC_{50}	> 1.3 mg/L	48 h	crustacea	*Daphnia magna*	ASTM E729-88 ASTM E729-88	/
2,2,4,6,6-pentamethylheptane	LC_{50}	> 2.8 mg/L	96 h	fish	*Danio rerio*	OECD 203	/

Chronic (long-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
styrene	NOEC	1.01 mg/l	21 days	crustacea	*Daphnia magna*	OECD 211	/
styrene	LOEC	2.06 mg/l	21 days	crustacea	*Daphnia magna*	/	/
styrene	EC50	1.88 mg/l	21 days	crustacea	*Daphnia magna*	OECD 203 OECD 203	/
styrene	LC_{50}	120 mg/kg soil dw	14 days	earthworms	*Eisenia fetida*	OECD 207	/
styrene	LOEC	65 mg/kg soil dw	/	earthworms	*Eisenia fetida*	OECD 207	burrowing time and mean percent weight change
styrene	LOEC	180 mg/kg soil dw	/	earthworms	*Eisenia fetida*	OECD 207	survival
styrene	NOEC	34 mg/kg soil dw	/	earthworms	*Eisenia fetida*	OECD 207	mean percent weight change
phthalic anhydride	NOEC	16 mg/l	21 days	crustacea	*Daphnia magna*	OECD 211	/
phthalic anhydride	EC50	42 mg/l	21 days	crustacea	*Daphnia magna*	OECD 211 OECD 211	/
phthalic anhydride	LC_{50}	560 mg/l	7 days	fish	*Danio rerio*	OECD 210 OECD 210	/
phthalic anhydride	LOEC	32 mg/l	60 days	fish	/	/	/
phthalic anhydride	NOEC	10 mg/l	60 days	fish	/	OECD 210 OECD 210	/

2,2,4,6,6-pentamethylheptane	NOEC	0.013 mg/l	21 days	crustacea	*Daphnia magna*	OECD 211	/
2,2,4,6,6-pentamethylheptane	NOELR	0.267 mg/l	28 days	fish	*Oncorhynchus mykiss*	QSAR QSAR	/

12.2 Persistence and degradability

Abiotic degradation, physical- and photo-chemical elimination

No information.

Biodegradation

For components

Name	Type	Rate	Time	Evaluation	Method	Remark
styrene	biodegradability	87 %	20 days	readily biodegradable	OECD 301 D	/
phthalic anhydride	biodegradability	68 %	10 days	readily biodegradable	OECD 301 D	/
phthalic anhydride	biodegradability	74 %	30 days	readily biodegradable	OECD 301 D	/
2,2,4,6,6-pentamethylheptane	biodegradability	14	31 days	Not inherently degradable	EPA OTS 796.3100	/

12.3 Bioaccumulative potential

Partition coefficient

For components

Name	Media	value	Temperature °C	pH	Concentration	Method
styrene	Octanol-water (log Pow)	3	/	/	/	/
phthalic anhydride	Octanol-water (log Pow)	1.6	/	/	/	/

Bioconcentration factor (BCF)

For components

Name	Species	organism	value	Duration	Evaluation	Method	Remark
styrene	BCF	/	74	/	/	/	Calculated value

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

No information.

Surface tension

No information.

Adsorption/Desorption

For components

Name	Type	Criterion	value	Evaluation	Method	Remark
styrene	Soil	/	352	/	/	Koc
styrene	Soil	log KOC	2.55	/	/	/
phthalic anhydride	Soil	/	31	/	/	Koc

12.5 Results of PBT and vPvB assessment

No evaluation.

12.6 Endocrine disrupting properties

No information.

12.7 Other adverse effects

No specific effects or critical hazards known.

12.8 Additional information

For product

Harmful to aquatic life with long lasting effects. Do not allow to reach ground water, water courses or sewage system.

For components

styrene

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).

silicon dioxide, amorphous

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).

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).

2,2,4,6,6-pentamethylheptane

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

Product / Packaging disposal

Waste chemical

Dispose of in accordance with applicable waste disposal regulation. 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.

Waste codes / waste designations according to LoW

No information.

Packaging

Dispose of in accordance with applicable waste disposal regulation. 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. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Uncleaned containers should not be perforated, cut or welded.

Waste codes / waste designations according to LoW

No information.

Waste treatment-relevant information

No information.

Sewage disposal-relevant information

No information.

Other disposal recommendations

No information.

SECTION 14: TRANSPORT INFORMATION

ADR/RID	IMDG	IATA	ADN
14.1 UN number or ID number			
UN 1866	UN 1866	UN 1866	UN 1866
14.2 UN proper shipping name			
RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION
14.3 Transport hazard class(es)			
3	3	3	3
			
14.4 Packing group			
III	III	III	III
14.5 Environmental hazards			
NO	NO	NO	NO
14.6 Special precautions for user			
Limited quantities 5 L Packing Instructions P001, IBC03, LP01, R001 Special packing provisions PP1 Transport category 3 Tunnel restriction code (D/E)	Limited quantities 5 L EmS F-E, S-E Flash point 31 °C	Limited Quantity, Packing Instructions (Ltd Qty, Pkg Inst) Y344 Limited Quantity, Maximum Net Quantity/Package (Ltd Qty, Max Net Qty/Pkg) 10 L Packing Instructions (Pkg Inst) 355 Maximum Net Quantity/Package (Max Net Qty/Pkg) 25 L Special provisions A3	Limited quantities 5 L
14.7 Maritime transport in bulk according to IMO instruments			
	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) 2020/878)

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

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

not applicable

Regulation EC 648/2004 on detergents

No information.

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

8.2 Exposure controls

Key literature references and sources for data

No information.

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
LC50 - Lethal Concentration to 50 % of a test population
LD50 - 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

List of relevant H phrases

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
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.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

- [x] Provided correct labelling of the product
- [x] Compliance with the local legislation
- [x] Provided correct classification of the product
- [x] Provided adequate transport data

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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.