

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878 - Europe

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

1.1 Product identifier

Product name : Hempaline Prepare 120
Product identity : 1704000004
Product type : Vinyl Ester Primer (base for multi-component product)

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

Field of application : metal industry
Ready-for-use mixture : Hempaline Prepare 120 = Hempaline Prepare 120 Base 49 Vol / Hempel's Curing Agent 9580A 1 Vol
Identified uses : Industrial applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details : HEMPEL A/S
Lundtoftegårdsvej 90
DK-2800 Kgs. Lyngby
Denmark
Tel.: + 45 45 93 38 00
hempel@hempel.com
Date of issue : 30 July 2021
Date of previous issue : 17 February 2021.

1.4 Emergency telephone number

Emergency telephone number (with hours of operation)

+45 45 93 38 00 (08.00 - 17.00)
See section 4 First aid measures.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Flam. Liq. 3, H226	FLAMMABLE LIQUIDS
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION
Skin Sens. 1, H317	SKIN SENSITIZATION
Repr. 2, H361d	TOXIC TO REPRODUCTION
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation)
STOT RE 1, H372	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)
Aquatic Chronic 3, H412	AQUATIC HAZARD (LONG-TERM)

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements :
H226 - Flammable liquid and vapor.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
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.

Precautionary statements :

Prevention : Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapor, mist or spray.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

SECTION 2: Hazards identification

Hazardous ingredients :  Styrene
 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with maleic anhydride and methacrylic acid
 methacrylic acid
 α , α -dimethylbenzyl hydroperoxide
 cobalt bis(2-ethylhexanoate)

Supplemental label elements :

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
 Styrene	REACH #: 01-2119457861-32 EC: 202-851-5 CAS: 100-42-5	≥25 - ≤50	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d STOT SE 3, H335 STOT RE 1, H372 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	D [1]
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with maleic anhydride and methacrylic acid	EC: 500-090-6 CAS: 36425-16-8	≥10 - ≤25	Skin Sens. 1B, H317	- [1]
methacrylic acid	REACH #: 01-2119463884-26 EC: 201-204-4 CAS: 79-41-4	≥1 - ≤3	Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 4, H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335	D [1]
α , α -dimethylbenzyl hydroperoxide	EC: 201-254-7 CAS: 80-15-9 Index: 617-002-00-8	≥1 - ≤3	Org. Perox. E, H242 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373	- [1]
tetramethylammonium chloride	EC: 200-880-8 CAS: 75-57-0	≤0.3	Aquatic Chronic 2, H411 Acute Tox. 2, H300 Acute Tox. 3, H311 Skin Irrit. 2, H315 STOT SE 1, H370	- [1]
N,N-diethylaniline	REACH #: 01-2119943758-22 EC: 202-088-8 CAS: 91-66-7 Index: 612-054-00-8	≤0.26	Aquatic Chronic 2, H411 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 STOT RE 2, H373	- [1]
cobalt bis(2-ethylhexanoate)	REACH #: 01-2119524678-29 EC: 205-250-6 CAS: 136-52-7	<0.3	Aquatic Chronic 2, H411 Eye Irrit. 2, H319 Skin Sens. 1A, H317 Repr. 1B, H360F	- [1]
1,4-dihydroxybenzene	EC: 204-617-8 CAS: 123-31-9 Index: 604-005-00-4	≤0.1	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412 Acute Tox. 4, H302 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341	- [1]

SECTION 3: Composition/information on ingredients

			Carc. 2, H351 Aquatic Acute 1, H400 (M=10) See Section 16 for the full text of the H statements declared above.	
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit, see section 8.
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

General :	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 112 and give immediate treatment (first aid).
Eye contact :	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.
Inhalation :	Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.
Skin contact :	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion :	If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.
Protection of first-aiders :	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact :	Causes serious eye damage.
Inhalation :	May cause respiratory irritation.
Skin contact :	Causes skin irritation. May cause an allergic skin reaction.
Ingestion :	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact :	Adverse symptoms may include the following: pain watering redness
Inhalation :	Adverse symptoms may include the following: respiratory tract irritation coughing reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact :	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations

SECTION 4: First aid measures

Ingestion : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media : Recommended: CO₂, powders, water spray/mist.
NOT TO BE USED: HALOGEN EXTINGUISHER.
After extinguishing the fire remaining peroxide must be sprayed with large amounts of water to cool the peroxide below the combustion - and decomposition temperature.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials: carbon oxides halogenated compounds

5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

 Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material.

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used.

Care should be taken when re-opening partly-used containers.

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. The storage temperature should not exceed 25°C. The product may not come in contact with alkaline-, acidic substances, rust, or flammable materials like dust, paper, wood etc. May cause fire or explosion. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Product/ingredient name	Exposure limit values
No exposure limit value known.	

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

Product/ingredient name	Type	Exposure	Value	Population	Effects
styrene α, α-dimethylbenzyl hydroperoxide 1,4-dihydroxybenzene	DNEL	Long term Inhalation	85 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	406 mg/kg	Workers	Systemic
	DNEL	Long term Inhalation	6 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	0.5 mg/m ³	General population	Local
	DNEL	Long term Inhalation	1 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	1.74 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	7 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	64 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	128 mg/kg bw/day	Workers	Systemic

Predicted effect concentrations

Product/ingredient name	Compartment Detail	Value	Method Detail
styrene α, α-dimethylbenzyl hydroperoxide	Fresh water	0.028 mg/l	-
	Marine water	0.014 mg/l	-
	Fresh water sediment	0.614 mg/kg	-
	Marine water sediment	0.307 mg/kg	-
	Sewage Treatment Plant	5 mg/l	-
	Soil	0.2 mg/kg	-
	Fresh water	0.0031 mg/l	-
	Marine water	0.00031 mg/l	-
	Sewage Treatment Plant	0.35 mg/l	-
	Fresh water sediment	0.023 mg/kg	-
	Marine water sediment	0.0023 mg/kg	-

SECTION 8: Exposure controls/personal protection

cobalt bis(2-ethylhexanoate)	Soil	0.0029 mg/kg	-
	Sewage Treatment Plant	0.37 mg/l	-
	Fresh water	0.62 µg/l	-
	Marine water	2.36 µg/l	-
	Fresh water sediment	53.8 mg/kg dwt	-
	Marine water sediment	69.8 mg/kg dwt	-
	Soil	10.9 mg/kg dwt	-

8.2 Exposure controls

Appropriate engineering controls

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Individual protection measures

General :	Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.
Hygiene measures :	Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
Eye/face protection :	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
Hand protection :	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances. Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice: Recommended: Silver Shield / Barrier / 4H gloves, polyvinyl alcohol (PVA), Viton® Short term exposure: nitrile rubber, neoprene rubber, butyl rubber, natural rubber (latex), polyvinyl chloride (PVC)
Body protection :	Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product. Wear suitable protective clothing. Always wear protective clothing when spraying.
Respiratory protection :	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. When the product is applied by spraying and for continuous or prolonged work always wear an air-fed respirator e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter. Be sure to use an approved/certified respirator or equivalent.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	-31°C This is based on data for the following ingredient: styrene
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 29°C (84.2°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.

SECTION 9: Physical and chemical properties

Flammability :	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and oxidizing materials. Slightly flammable in the presence of the following materials or conditions: reducing materials.
Lower and upper explosive (flammable) limits :	0.9 - 8.8 vol %
Vapor pressure :	0.009 kPa This is based on data for the following ingredient: epoxy vinyl ester resin
Vapor density :	Testing not relevant or not possible due to nature of the product.
Specific gravity :	1.078 g/cm ³
Solubility(ies) :	
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Lowest known value: 148.85°C (299.9°F) (α, α-dimethylbenzyl hydroperoxide).
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Aspiration hazard (H304) Not classified. Testing not relevant due to nature of the product.
Explosive properties :	Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight :	Weighted average: 37 %
Water % by weight :	Weighted average: 0 %
VOC content :	22.6 g/l
TOC Content :	Weighted average: 357 g/l
Solvent Gas :	Weighted average: 0.098 m ³ /l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Extremely reactive or incompatible with the following materials: acids.
Highly reactive or incompatible with the following materials: oxidizing materials.
Reactive or incompatible with the following materials: reducing materials and alkalis.
Slightly reactive or incompatible with the following materials: combustible materials.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:
Decomposition products may include the following materials: carbon oxides halogenated compounds

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Direct contact with the eyes can cause irreversible damage, including blindness.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
styrene	LC50 Inhalation Gas.	Rat	2770 ppm	4 hours
	LC50 Inhalation Vapor	Rat	11800 mg/m ³	4 hours
methacrylic acid	LD50 Oral	Rat	2650 mg/kg	-
	LD50 Dermal	Rabbit	500 - 1000 mg/kg	-
	LD50 Oral	Rat	1320 mg/kg	-
α, α-dimethylbenzyl hydroperoxide	LD50 Oral	Rat	382 mg/kg	-
tetramethylammonium chloride	LD50 Dermal	Rabbit	200 - 500 mg/kg	-
	LD50 Oral	Rat	47 mg/kg	-
N,N-diethylaniline	LC50 Inhalation Vapor	Rat	1920 mg/m ³	4 hours
	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	720 mg/kg	-
cobalt bis(2-ethylhexanoate)	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	3129 mg/kg	-
1,4-dihydroxybenzene	LD50 Oral	Rat	302 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral mg/kg	Dermal mg/kg	Inhalation (gases) ppm	Inhalation (vapors) mg/l	Inhalation (dusts and mists) mg/l
Hempaline Prepare 120	8894.6	34409.2		34.1	28.7
styrene	2650			11.8	
methacrylic acid	1320	300			1.5
α, α-dimethylbenzyl hydroperoxide	382	1100			0.5
tetramethylammonium chloride	47	300			
N,N-diethylaniline	100	300		1.92	
cobalt bis(2-ethylhexanoate)	3129				
1,4-dihydroxybenzene	302				

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
styrene	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams
	Skin - Irritant	Rabbit	-	-
α, α-dimethylbenzyl hydroperoxide	Skin - Severe irritant	Rabbit	-	-
N,N-diethylaniline	Eyes - Mild irritant	Rabbit	-	0.1 Milliliters
	Skin - Severe irritant	Rabbit	-	24 hours 0.5 Milliliters
1,4-dihydroxybenzene	Skin - Mild irritant	Human	-	2 %
	Skin - Severe irritant	Human	-	5 %

Sensitizer

Product/ingredient name	Route of exposure	Species	Result
cobalt bis(2-ethylhexanoate)	skin	Mouse	Sensitizing

Mutagenic effects

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Teratogenic effects

Suspected of damaging the unborn child.

Specific target organ toxicity (single exposure)

SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
styrene methacrylic acid α , α -dimethylbenzyl hydroperoxide	Category 3 Category 3 Category 3		Respiratory tract irritation Respiratory tract irritation Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
styrene α , α -dimethylbenzyl hydroperoxide	Category 1 Category 2	- -	hearing organs -

Aspiration hazard

Product/ingredient name	Result
styrene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitization :  contains cobalt bis(2-ethylhexanoate). May produce an allergic reaction.

11.2 Information on other hazards

Endocrine disrupting properties : No known data available in our database.

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses. Harmful to aquatic life with long lasting effects.

Product/ingredient name	Result	Species	Exposure
 styrene	Chronic NOEC 63 μ g/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
methacrylic acid	Chronic NOEC 53 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
α , α -dimethylbenzyl hydroperoxide	Acute EC50 3.1 mg/l	Algae	72 hours
	Acute LC50 3.9 mg/l	Fish	96 hours
tetramethylammonium chloride	EC50 115 mg/l	Algae	72 hours
	Acute LC50 3.6 mg/l	Daphnia	48 hours
N,N-diethylaniline	Acute LC50 462 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 1.3 - 1.6 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 16400 μ g/l Fresh water	Fish - Pimephales promelas	96 hours
cobalt bis(2-ethylhexanoate)	Acute LC50 0.1 - 1 mg/l	Fish	96 hours
1,4-dihydroxybenzene	Acute EC50 130 μ g/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
	Acute LC50 44 μ g/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
 styrene	-	>60 % - Readily - 10 days	-	-
methacrylic acid	-	87 % - Readily - 28 days	-	-
tetramethylammonium chloride	OECD 301B Ready Biodegradability - CO ₂ Evolution Test	100 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
 styrene	-	-	Readily
methacrylic acid	-	-	Readily
tetramethylammonium chloride	-	-	Readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
styrene	2.96	13.49	low
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with maleic anhydride and methacrylic acid	<0.3	-	low
methacrylic acid	0.93	1	low
α, α-dimethylbenzyl hydroperoxide	1.6	9	low
N,N-diethylaniline	3.31	102.33	low
cobalt bis(2-ethylhexanoate)	-	15600	high
1,4-dihydroxybenzene	0.59	3.162	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : No known data available in our database.

Mobility : No known data available in our database.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.							

12.6 Endocrine disrupting properties

No known data available in our database.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

European waste catalogue no. (EWC) is given below.

European waste catalogue (EWC) : 08 01 11*

Packaging

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea, IATA for transport by air.

14.1 UN / ID no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
ADR/RID Class	Not dangerous goods (styrene)	3 	III	No.	-
IMDG Class	Not dangerous goods (styrene)	3 	III	No.	-
IATA Class	Not dangerous goods (styrene)	3 	III	No.	-

PG* : Packing group

Env.* : Environmental hazards

14.6 Special precautions for user

SECTION 14: Transport information

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorization - Substances of very high concern

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other EU regulations

Seveso category This product is controlled under the Seveso III Directive.

Seveso category
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b

15.2 Chemical Safety Assessment

SECTION 16: Other information

Abbreviations and acronyms :

ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
EUH statement = CLP-specific Hazard statement
RRN = REACH Registration Number
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of abbreviated H statements :

H226	Flammable liquid and vapor.
H242	Heating may cause a fire.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H360F	May damage fertility.
H361d	Suspected of damaging the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

SECTION 16: Other information

Full text of classifications [CLP/GHS] :	Acute Tox. 2	ACUTE TOXICITY - Category 2
	Acute Tox. 3	ACUTE TOXICITY - Category 3
	Acute Tox. 4	ACUTE TOXICITY - Category 4
	Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
	Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - Category 2
	Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
	Asp. Tox. 1	ASPIRATION HAZARD - Category 1
	Carc. 2	CARCINOGENICITY - Category 2
	Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
	Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
	Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
	Muta. 2	GERM CELL MUTAGENICITY - Category 2
	Org. Perox. E	ORGANIC PEROXIDES - Type E
	Repr. 1B	TOXIC TO REPRODUCTION - Category 1B
	Repr. 2	TOXIC TO REPRODUCTION - Category 2
	Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
	Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
	Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
	Skin Sens. 1	SKIN SENSITIZATION - Category 1
	Skin Sens. 1A	SKIN SENSITIZATION - Category 1A
	Skin Sens. 1B	SKIN SENSITIZATION - Category 1B
	STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
	STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
	STOT SE 1	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
	STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
FLAMMABLE LIQUIDS SKIN CORROSION/IRRITATION SERIOUS EYE DAMAGE/ EYE IRRITATION SKIN SENSITIZATION TOXIC TO REPRODUCTION SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) AQUATIC HAZARD (LONG-TERM)	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

Notice to reader

Indicates information that has changed from previously issued version.

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical performance or suitability for particular applications.

It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.