

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

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

1.1 Product identifier

Product name : Hempadur 17949 Base
Product identity : 1794919880
Product type : epoxy 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, ships and shipyards.
Ready-for-use mixture : 17940 = 17949 2 vol. / 97290 1 vol.
Identified uses : Industrial applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details : Hempel UK Ltd
Berwyn House, The Pavilions
Llantarnam Park
Cwmbran
South Wales NP44 3FD
Telephone: 01633 833600
hempel@hempel.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation)

01633 833600 (08.00 - 17.00)
See Section 4 of the safety data sheet (first aid measures).

Date of issue : 21 December 2022
Date of previous issue : 14 December 2021.

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
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/EYE IRRITATION
Skin Sens. 1, H317	SKIN SENSITISATION
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation)
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects)
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE
Aquatic Chronic 2, H411	LONG-TERM (CHRONIC) AQUATIC HAZARD

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

2.2 Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements :
H226 - Flammable liquid and vapour.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H373 - May cause damage to organs through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention : Wear protective gloves. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Do not breathe vapor, mist or spray.
Response : Collect spillage.
Hazardous ingredients : Solvent naphtha (petroleum), light arom.
white spirit
bis-[4-(2,3-epoxipropoxy)phenyl]propane

SECTION 2: Hazards identification

Supplemental label elements : Repeated exposure may cause skin dryness or cracking.

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
Solvent naphtha (petroleum), light arom.	REACH #: 01-2119455851-35 EC: 918-668-5 CAS: 64742-95-6	≥25 - ≤50	Flam. Liq. 3, H226 - STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	[1] [2]
1-methoxy-2-propanol	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	≥10 - ≤25	Flam. Liq. 3, H226 - STOT SE 3, H336	[1] [2]
Solvent naphtha (petroleum), light arom.	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6	≥1 - ≤3	Flam. Liq. 3, H226 - STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	[1] [2]
white spirit	REACH #: 01-2119458049-33 EC: 265-191-7 CAS: 64742-88-7 Index: 649-405-00-X	≥1 - ≤3	Flam. Liq. 3, H226 - STOT SE 3, H336 STOT RE 1, H372 (central nervous system (CNS)) (inhalation) Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]
bis-[4-(2,3-epoxypropoxy)phenyl] propane	REACH #: 01-2119456619-26 EC: 216-823-5 CAS: 1675-54-3 Index: 603-073-00-2	≥1 - ≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
3-(2,3-epoxypropoxy) propyl trimethoxy silane	REACH #: 01-2119513212-58 EC: 219-784-2 CAS: 2530-83-8	≥1 - <3	Eye Dam. 1, H318	[1]
4,4'-isopropylidenediphenol	REACH #: 01-2119457856-23 EC: 201-245-8 CAS: 80-05-7 Index: 604-030-00-0	<0.1	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360F STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	[1] [2] [3]

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 of equivalent concern

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 recognised 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 irritation.
Inhalation :	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Skin contact :	Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
Ingestion :	Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact :	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation :	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact :	Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion :	No specific data.

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: Approved Class D extinguisher or smother with dry sand, dry clay or dry ground limestone.
NOT TO BE USED: WATER. Risk of formation of very flammable and explosive vapours.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid and vapour. 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 toxic 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 metal oxide/oxides

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. Do not use water. Violent reaction may occur. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapour 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 spilt 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. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach the 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 spilt 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. Open with care, danger of overpressure.

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 for flammable liquids. 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 as well as of amines, alcohols and water. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 7: Handling and storage

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
Solvent naphtha (petroleum), light arom. 1-methoxy-2-propanol Solvent naphtha (petroleum), light arom. white spirit 4,4'-isopropylidenediphenol	EU OEL (Europe). TWA: 120 mg/m ³ 8 hours. Form: Tentativ TWA: 25 ppm 8 hours. Form: Tentativ EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 560 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. EU OEL (Europe). TWA: 120 mg/m ³ 8 hours. Form: Tentativ TWA: 25 ppm 8 hours. Form: Tentativ EU OEL (Europe). (ACGIH) TWA: 25 ppm 8 hours. (ACGIH) TWA: 145 mg/m ³ 8 hours. EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 2 mg/m ³ 8 hours.

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
Solvent naphtha (petroleum), light arom.	DNEL	Long term Dermal	25 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	150 mg/m ³	Workers	Systemic
1-methoxy-2-propanol	DNEL	Long term Dermal	50.6 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	369 mg/m ³	Workers	Systemic
Solvent naphtha (petroleum), light arom.	DNEL	Long term Dermal	25 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	150 mg/m ³	Workers	Systemic
white spirit	DNEL	Long term Dermal	21 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	330 mg/m ³	Workers	Systemic
bis-[4-(2,3-epoxipropoxy)phenyl]propane	DNEL	Long term Dermal	0.75 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	4.93 mg/m ³	Workers	Systemic
3-(2,3-epoxypropoxy) propyl trimethoxy silane	DNEL	Long term Dermal	21 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	147 mg/m ³	Workers	Systemic
4,4'-isopropylidenediphenol	DNEL	Long term Dermal	0.031 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2 mg/m ³	Workers	Systemic

Predicted effect concentrations

Product/ingredient name	Compartment Detail	Value	Method Detail
1-methoxy-2-propanol	Fresh water	10 mg/l	-
	Marine water	1 mg/l	-
	Fresh water sediment	41.6 mg/kg	-
	Sediment	4.7 mg/kg	-
	Soil	2.47 mg/kg	-
	Sewage Treatment Plant	100 mg/l	-
	Marine water sediment	5.2 mg/kg dwt	-
aluminium powder (pyrophoric)	Fresh water	0.0749 mg/l	-
	Sewage Treatment Plant	20 mg/l	-
	Fresh water	0.006 mg/l	-
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Fresh water sediment	0.341 mg/kg dwt	-
	Soil	0.065 mg/kg dwt	-
	Marine water	0.001 mg/l	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water sediment	0.341 mg/kg dwt	-

SECTION 8: Exposure controls/personal protection

3-(2,3-epoxypropoxy) propyl trimethoxy silane	Marine water sediment	0.034 mg/kg dwt	-
	Fresh water	1 mg/l	-
	Marine	0.1 mg/l	-
	Sediment	0.79 mg/kg dwt	-
	Soil	0.13 mg/kg dwt	-
bisphenol A	Sewage Treatment Plant	>10 mg/l	-
	Fresh water	0.018 mg/l	-
	Marine water	0.016 mg/l	-
	Sewage Treatment Plant	320 mg/l	-
	Sediment	1.2 mg/kg	-
methanol	Soil	3.7 mg/kg	-
	Fresh water	0.062 mg/l	-
	Marine water	0.0062 mg/l	-
	Fresh water sediment	0.22 mg/kg dwt	-
	Marine water sediment	0.022 mg/kg dwt	-
xylene	Soil	0.0085 mg/kg dwt	-
	Sewage Treatment Plant	25 mg/l	-
	Fresh water	0.327 mg/l	-
	Marine water	0.327 mg/l	-
	Fresh water sediment	12.46 mg/kg	-
n-butyl acetate	Marine water sediment	12.46 mg/kg	-
	Soil	2.31 mg/kg	-
	Sewage Treatment Plant	6.68 mg/l	-
	Fresh water	0.18 mg/l	-
	Marine	0.018 mg/l	-
ethylbenzene	Fresh water sediment	0.981 mg/kg	-
	Marine water sediment	0.0981 mg/kg	-
	Soil	0.0903 mg/kg	-
	Sewage Treatment Plant	35.6 mg/l	-
	Fresh water	0.1 mg/l	-
toluene	Marine water	0.01 mg/l	-
	Sewage Treatment Plant	9.6 mg/l	-
	Fresh water sediment	13.7 mg/kg	-
	Soil	2.68 mg/kg	-
	Fresh water	0.68 mg/l	-
formaldehyde	Marine water	0.68 mg/l	-
	Sewage Treatment Plant	13.61 mg/l	-
	Fresh water sediment	16.39 mg/kg	-
	Marine water sediment	16.39 mg/kg	-
	Soil	2.89 mg/kg	-
	Fresh water	0.47 mg/l	-
	Marine water	0.47 mg/l	-
	Fresh water sediment	2.44 mg/kg	-
	Marine water sediment	2.44 mg/kg	-
	Soil	0.29 mg/kg	-
	Sewage Treatment Plant	0.19 mg/l	-

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.
- 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.

SECTION 8: Exposure controls/personal protection

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®
May be used: nitrile rubber
Short term exposure: 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. 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.
- Colour : Grey.
- Odour : Solvent-like
- pH : Testing not relevant or not possible due to nature of the product.
- Melting point/freezing point : -16°C This is based on data for the following ingredient: bisphenol A-(epichlorhydrin) epoxy resin MW >1100
- Boiling point/boiling range : Testing not relevant or not possible due to nature of the product.
- Flash point : Closed cup: 35°C (95°F)
- Evaporation rate : Testing not relevant or not possible due to nature of the product.
- Flammability : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Flammable in the presence of the following materials or conditions: oxidising materials.
Slightly flammable in the presence of the following materials or conditions: reducing materials.
- Lower and upper explosive (flammable) limits : 0.6 - 13.74 vol %
- Vapour pressure : 0 kPa This is based on data for the following ingredient: bisphenol A-(epichlorhydrin) epoxy resin MW >1100
- Vapour density : Testing not relevant or not possible due to nature of the product.
- Specific gravity : 1.051 g/cm³
- Partition coefficient (LogKow) : Testing not relevant or not possible due to nature of the product.
- Auto-ignition temperature : Lowest known value: >220°C (>428°F) (white spirit).
- 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, heat and oxidising materials.
Slightly explosive in the presence of the following materials or conditions: reducing materials and moisture.
- Oxidising properties : Testing not relevant or not possible due to nature of the product.

9.2 Other information

- Solvent(s) % by weight : Weighted average: 54 %
- Water % by weight : Weighted average: 0 %
- VOC content : 571.3 g/l
- VOC content, Ready-for-use mixture : 611.1 g/l

SECTION 9: Physical and chemical properties

TOC Content : Weighted average: 404 g/l
 Solvent Gas : Weighted average: 0.13 m³/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 pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Highly reactive or incompatible with the following materials: oxidising materials and acids.
 Reactive or incompatible with the following materials: reducing materials, organic materials and moisture.

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 metal oxide/oxides

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.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Solvent naphtha (petroleum), light arom.	LC50 Inhalation Vapour	Rat	6193 mg/m³	4 hours
1-methoxy-2-propanol	LD50 Dermal	Rabbit	3160 mg/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
Solvent naphtha (petroleum), light arom.	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	4016 mg/kg	-
	LC50 Inhalation Vapour	Rat	6193 mg/m³	4 hours
bis-[4-(2,3-epoxypropoxy)phenyl] propane	LD50 Dermal	Rabbit	3160 mg/kg	-
	LD50 Oral	Rat	3492 mg/kg	-
	LD50 Dermal	Rabbit	20 g/kg	-
3-(2,3-epoxypropoxy) propyl trimethoxy silane	LC50 Inhalation Dusts and mists	Rat	5.3 mg/l	4 hours
	LD50 Dermal	Rat	4250 mg/kg	-
4,4'-isopropylidenediphenol	LD50 Oral	Rat	7010 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	3250 mg/kg	-
	LD50 Oral	Rat	3250 mg/kg	-

Acute toxicity estimates

SECTION 11: Toxicological information

Product/ingredient name	Oral mg/kg	Dermal mg/kg	Inhalation (gases) ppm	Inhalation (vapours) mg/l	Inhalation (dusts and mists) mg/l
Solvent naphtha (petroleum), light arom.	8400	3160			
1-methoxy-2-propanol	4016	13000			
Solvent naphtha (petroleum), light arom.	3492	3160			
bis-[4-(2,3-epoxipropoxy)phenyl]propane		20000			
3-(2,3-epoxypropoxy) propyl trimethoxy silane	7010	4250			5.3
4,4'-isopropylidenediphenol	3250				

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
Solvent naphtha (petroleum), light arom.	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters
1-methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams
Solvent naphtha (petroleum), light arom.	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Respiratory - Mild irritant	Rabbit	-	-
	Skin - Moderate irritant	Rabbit	-	-
	Eyes - Irritant	Rabbit	-	-
3-(2,3-epoxypropoxy) propyl trimethoxy silane	Skin - Irritant	Rabbit	-	-
	Eyes - Irritant	Rabbit	-	-
4,4'-isopropylidenediphenol	Eyes - Severe irritant	Rabbit	-	24 hours 250 Micrograms
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams

Sensitiser

Product/ingredient name	Route of exposure	Species	Result
bis-[4-(2,3-epoxipropoxy)phenyl]propane	skin	Mouse	Sensitising
3-(2,3-epoxypropoxy) propyl trimethoxy silane	skin	Guinea pig	Not 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

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Solvent naphtha (petroleum), light arom.	Category 3		Respiratory tract irritation
1-methoxy-2-propanol	Category 3		Narcotic effects
1,2,4-trimethylbenzene	Category 3		Narcotic effects
white spirit	Category 3		Respiratory tract irritation
4,4'-isopropylidenediphenol	Category 3		Narcotic effects
	Category 3		Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
white spirit	Category 1	inhalation	central nervous system (CNS)

Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), light arom. white spirit	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

SECTION 11: Toxicological information

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
3-(2,3-epoxypropoxy) propyl trimethoxy silane	Sub-acute NOAEL Oral	Rat	500 mg/kg	28 days
	Sub-acute NOAEL Inhalation Dusts and mists	Rat	0.225 mg/kg	14 days

Sensitisation : Contains bis-[4-(2,3-epoxypropoxy)phenyl]propane. May produce an allergic reaction.

11.2 Information on other hazards

Endocrine disrupting properties : See Section 15 for details.

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. Toxic to aquatic life with long lasting effects.

Product/ingredient name	Result	Species	Exposure
Solvent naphtha (petroleum), light arom.	Acute EC50 19 mg/l	Algae - Pseudokirchneriella subcapitata (green algae)	96 hours
	Acute EC50 6.14 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 9.22 mg/l	Fish - Oncorhynchus mykiss (rainbow trout)	96 hours
1-methoxy-2-propanol	Acute EC50 1000 mg/l	Algae - Pseudokirchneriella subcapitata (green algae)	7 days
Solvent naphtha (petroleum), light arom.	Acute EC50 23300 mg/l	Daphnia - Daphnia magna (Water flea)	48 hours
	Acute LC50 6812 mg/l	Fish - Leuciscus idus	96 hours
	Acute EC50 2.6 mg/l	Algae - Pseudokirchneriella subcapitata (green algae)	96 hours
white spirit	Acute EC50 3.2 mg/l	Daphnia	48 hours
	Acute LC50 9.22 mg/l	Fish - Oncorhynchus mykiss (rainbow trout)	96 hours
	Acute EC50 4.6 - 10 mg/l	Algae	72 hours
bis-[4-(2,3-epoxypropoxy)phenyl] propane	Acute EC50 10 - 20 mg/l	Daphnia	48 hours
	Acute EC50 10 - 30 mg/l	Fish	96 hours
	Acute EC50 9.4 mg/l	Algae	72 hours
3-(2,3-epoxypropoxy) propyl trimethoxy silane	Acute EC50 2.1 mg/l	Daphnia	48 hours
	Acute LC50 1.3 mg/l	Fish	96 hours
	Acute EC50 324 mg/l	Daphnia	48 hours
4,4'-isopropylidenediphenol	Acute LC50 55 mg/l	Fish - Cyprinus carpio	96 hours
	Acute LC50 7.5 mg/l	Fish	96 hours
	Chronic NOEC 0.8 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.2 - 20 ppb Fresh water	Fish - Xiphophorus helleri - Juvenile (Fledgling, Hatchling, Weanling)	60 days

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Solvent naphtha (petroleum), light arom.	-	>70 % - Readily - 28 days	-	-
	1-methoxy-2-propanol	OECD 301E Ready Biodegradability - Modified OECD Screening Test	96 % - Readily - 28 days	-
Solvent naphtha (petroleum), light arom.	OECD 301F Ready Biodegradability - Manometric Respirometry Test	78 % - Readily - 28 days	-	-
	-	>70 % - Readily - 28 days	-	-
white spirit	-	>60 % - Readily - 28 days	-	-
	301F Ready Biodegradability - Manometric Respirometry Test	7 - 74 % - Readily - 28 days	-	-
bis-[4-(2,3-epoxypropoxy)phenyl] propane	OECD 301F Ready Biodegradability - Manometric Respirometry Test	5 % - Not readily - 28 days	-	-
	-	37 % - Not readily - 28 days	-	-
4,4'-isopropylidenediphenol	-	1 - 2 % - Not readily - 28 days	-	-

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Solvent naphtha (petroleum), light arom.	-	-	Readily
1-methoxy-2-propanol	-	-	Readily
Solvent naphtha (petroleum), light arom.	-	-	Readily
white spirit	-	-	Readily
bis-[4-(2,3-epoxypropoxy)phenyl] propane	-	-	Not readily
3-(2,3-epoxypropoxy) propyl trimethoxy silane	-	-	Not readily
4,4'-isopropylidenediphenol	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Solvent naphtha (petroleum), light arom.	-	10 - 2500	high
1-methoxy-2-propanol	<1	<100	low
Solvent naphtha (petroleum), light arom.	-	10 - 2500	high
white spirit	3 - 7.3	-	high
3-(2,3-epoxypropoxy) propyl trimethoxy silane	0.5	-	low
4,4'-isopropylidenediphenol	3.4	20 - 67	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

See Section 15 for details.

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 minimised 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 minimised 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.

SECTION 14: Transport information

	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	UN1263	PAINT	3  	III	Yes.	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Tunnel code (D/E)
IMDG Class	UN1263	PAINT. (Solvent naphtha (petroleum), light arom.)	3  	III	Yes.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-E,S-E
IATA Class	UN1263	PAINT	3 	III	Yes.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

PG* : Packing group

Env.* : Environmental hazards

14.6 Special precautions for user

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 authorisation - Substances of very high concern

Annex XIV

None of the components are listed.

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
 4'-isopropylidenediphenol	Toxic to reproduction	Recommended	ED/01/2018	10/1/2019
4,4'-isopropylidenediphenol	Endocrine disrupting properties for human health	Recommended	ED/01/2018	10/1/2019
4,4'-isopropylidenediphenol	Endocrine disrupting properties for environment	Recommended	ED/01/2018	10/1/2019

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 E2: Hazardous to the aquatic environment - Chronic 2

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 :

~~H~~226 Flammable liquid and vapour.
 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.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H360F May damage fertility.
 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.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.
 EUH066 Repeated exposure may cause skin dryness or cracking.


Full text of classifications [CLP/GHS] :

~~A~~quatic Acute 1 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
 Aquatic Chronic 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
 Aquatic Chronic 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
 Asp. Tox. 1 ASPIRATION HAZARD - Category 1
 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
 Repr. 1B REPRODUCTIVE TOXICITY - Category 1B
 Skin Irrit. 2 SKIN CORROSION/IRRITATION - Category 2
 Skin Sens. 1 SKIN SENSITISATION - Category 1
 STOT RE 1 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
 STOT RE 2 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
 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	On basis of test data
SERIOUS EYE DAMAGE/EYE IRRITATION	Calculation method
SKIN SENSITISATION	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation)	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects)	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	Calculation method
LONG-TERM (CHRONIC) AQUATIC HAZARD	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.