SAFETY DATA SHEET



Date of issue/Date of revision : 15 March 2024 Version : 1.04

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

1.1 Product identifier

Product name : SIGMAFAST 278 BASE RAL 9001

Product code : 00444770

Other means of identification

Not available.

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

Product use : Professional applications, Used by spraying.

Use of the substance/

mixture

: Coating.

Uses advised against: Product is not intended, labelled or packaged for consumer use.

1.3 Details of the supplier of the safety data sheet

PPG Coatings Belgium BV/SRL Tweemontstraat 104 B-2100 Deurne Belgium Telephone +32-33606311 Fax +32-33606435

e-mail address of person responsible for this SDS

: Product.Stewardship.EMEA@ppg.com

1.4 Emergency telephone number

Supplier

+31 20 4075210

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 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

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

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SECTION 2: Hazards identification

2.2 Label elements

Hazard pictograms







Signal word : Warning

Hazard statements: Flammable liquid and vapour.

Causes skin irritation.

May cause an allergic skin reaction. Causes serious eye irritation.

Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention: Wear protective gloves. Wear eye or face protection. Keep away from heat, hot

surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to

the environment. Avoid breathing vapour.

Response : Collect spillage.
Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and

international regulations.

P280, P210, P273, P261, P391, P501

Hazardous ingredients : bis-[4-(2,3-epoxipropoxi)phenyl]propane

Phenol, styrenated

oxirane, mono[(C12-14-alkyloxy)methyl] derivs. Octadecanamide, N,N'-1,6-hexanediylbis[12-hydroxy-

Supplemental label elements

: Contains epoxy constituents. May produce an allergic reaction.

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

: Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant

fastenings

: Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB

: 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

: Prolonged or repeated contact may dry skin and cause irritation.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

3.2 WIXTURES	iviixture		<u></u>	1	
Product/ingredient name	Identifiers	% by weight	Classification	Specific Conc. Limits, M-factors and ATEs	Туре
brs-[4-(2,3-epoxipropoxi) phenyl]propane	REACH #: 01-2119456619-26 EC: 216-823-5 CAS: 1675-54-3 Index: 603-073-00-2	≥10 - ≤25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	Skin Irrit. 2, H315: C ≥ 5% Eye Irrit. 2, H319: C ≥ 5%	[1]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7	≥5.0 - ≤10	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Dermal] = 1700 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥1.0 - ≤5.0	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	ATE [Oral] = 1230 mg/kg ATE [Inhalation (dusts and mists)] = 1.5 mg/l	[1] [2]
Phenol, styrenated	EC: 262-975-0 CAS: 61788-44-1	≥1.0 - ≤5.0	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 2, H411	-	[1]
1-methoxy-2-propanol	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	≥1.0 - ≤5.0	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1.0 - ≤5.0	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Inhalation (vapours)] = 17.8 mg/l	[1] [2]
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	REACH #: 01-2119485289-22 EC: 271-846-8 CAS: 68609-97-2 Index: 603-103-00-4	≥1.0 - ≤5.0	Skin Irrit. 2, H315 Skin Sens. 1, H317	-	[1]
trizinc bis(orthophosphate)	REACH #: 01-2119485044-40 EC: 231-944-3 CAS: 7779-90-0 Index: 030-011-00-6	≤1.0	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
Octadecanamide, N,	CAS: 55349-01-4	<1.0	Skin Sens. 1, H317	-	[1]
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SECTION 3: Composition/	information on ingredients
N'-1,6-hexanediylbis [12-hydroxy-	See Section 16 for the full text of the H statements declared above.

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SUB codes represent substances without registered CAS Numbers.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact: Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids

apart for at least 10 minutes and seek immediate medical advice.

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.

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 the container or label. Keep

person warm and at rest. Do NOT induce vomiting.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. 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 : No known significant effects or critical hazards.

Skin contact: Causes skin irritation. Defatting to the skin. 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 or irritation watering redness

Inhalation : No specific data.

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

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SECTION 4: First aid measures

Notes to physician

: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

: No specific treatment. **Specific treatments**

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing

media

: Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing

media

: Do not use water jet.

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

Special precautions for fire-fighters

: 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters 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

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

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. Collect spillage.

6.3 Methods and material for containment and cleaning up

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SECTION 6: Accidental release measures

Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor. 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

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

: Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

See Section 1.2 for Identified uses.

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SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
kylene	EU OEL (Europe, 1/2022). [xylene, mixed isomers pure] Absorbed through skin. STEL: 442 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes.
	TWA: 221 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
benzyl alcohol	IPEL (-). TWA: 5 ppm STEL: 10 ppm
1-methoxy-2-propanol	EU OEL (Europe, 1/2022). Absorbed through skin. STEL: 568 mg/m³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
ethylbenzene	EU OEL (Europe, 1/2022). Absorbed through skin. STEL: 884 mg/m³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 442 mg/m³ 8 hours. TWA: 100 ppm 8 hours.

procedures

Recommended monitoring: 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.

DNELs

Type	Exposure	Value	Population	Effects
DNEL	Long term Inhalation	12.25 mg/m³	Workers	Systemic
DNEL	Short term Inhalation	12.25 mg/m³	Workers	Systemic
DNEL	Long term Dermal	8.33 mg/kg bw/day	Workers	Systemic
DNEL	Short term Dermal	8.33 mg/kg bw/day	Workers	Systemic
DNEL	Long term Dermal	3.571 mg/kg bw/day	General population [Consumers]	Systemic
DNEL	Short term Dermal	3.571 mg/kg bw/day	General population	Systemic
DNEL	Long term Oral	0.75 mg/kg bw/day	General population	Systemic
DNEL	Short term Oral	0.75 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL DNEL DNEL DNEL DNEL DNEL	DNEL Long term Inhalation DNEL Short term Inhalation Long term Dermal Short term Dermal Long term Dermal DNEL Short term Dermal DNEL Short term Dermal DNEL Long term Dermal	DNEL Long term Inhalation 12.25 mg/m³ DNEL Short term Inhalation Long term Dermal Short term Dermal Long term Dermal Long term Dermal Long term Dermal Long term Dermal Short term Dermal Short term Dermal Short term Dermal 3.571 mg/kg bw/day DNEL Short term Dermal 3.571 mg/kg bw/day DNEL Long term Oral 0.75 mg/kg bw/day	DNEL Long term Inhalation DNEL Short term Inhalation DNEL Long term Dermal DNEL Short term Dermal DNEL Short term Dermal DNEL Long term Dermal DNEL Long term Dermal DNEL Short term Dermal DNEL Short term Dermal DNEL Short term Dermal DNEL Short term Dermal DNEL Short term Dermal DNEL Short term Dermal DNEL Short term Oral DNEL Short term Oral

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SECTION 8: Exposure controls/personal protection

SECTION 6. Exposure	COIIL	ois/personal pro	tection		
	DNEL	Long term Dermal	89.3 μg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	0.5 mg/kg bw/day	General population	
	DNEL	Long term Dermal	0.75 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.87 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	4.93 mg/m ³	Workers	Systemic
xylene	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic
Aylerie	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Local
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	
	DNEL	_		General population	Systemic
		Long term Dermal	125 mg/kg bw/day		Systemic
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	221 mg/m³	Workers	Local
	DNEL	Long term Inhalation	221 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	260 mg/m³	General population	
	DNEL	Short term Inhalation	260 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	442 mg/m³	Workers	Local
	DNEL	Short term Inhalation	442 mg/m³	Workers	Systemic
benzyl alcohol	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	5.4 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	8 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	20 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	22 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	27 mg/m³	General population	Systemic
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	110 mg/m ³	Workers	Systemic
Phenol, styrenated	DNEL	Long term Oral	0.75 mg/kg bw/day	General population	Systemic
Friendi, styrenated	DNEL	Long term Dermal	0.75 mg/kg bw/day	General population	-
		•			Systemic
	DNEL	Long term Inhalation	1.31 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	2.1 mg/kg bw/day	Workers	Systemic
4 (1 0	DNEL	Long term Inhalation	7.4 mg/m³	Workers	Systemic
1-methoxy-2-propanol	DNEL	Long term Oral	33 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	43.9 mg/m³	General population	Systemic
	DNEL	Long term Dermal	78 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	183 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	369 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	553.5 mg/m³	Workers	Local
	DNEL	Short term Inhalation	553.5 mg/m ³	Workers	Systemic
ethylbenzene	DMEL	Long term Inhalation	442 mg/m³	Workers	Local
	DMEL	Short term Inhalation	884 mg/m³	Workers	Systemic
	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	15 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	77 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	293 mg/m ³	Workers	Local
oxirane, mono[DNEL	Long term Oral	0.5 mg/kg bw/day	General population	Systemic
(C12-14-alkyloxy)methyl]		3	3 3 ,	' '	,
derivs.					
	DNEL	Long term Dermal	0.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.87 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	1 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	3.6 mg/m ³	Workers	Systemic
trizinc bis(orthophosphate)	DNEL	Long term Oral	0.83 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	2.5 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	5 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic
	DI VLL	Long tomi Domiai	55 mg/kg bw/day	1101010	Systemic

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SECTION 8: Exposure controls/personal protection

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
s-[4-(2,3-epoxipropoxi)phenyl]	-	Fresh water	0.006 mg/l	Assessment Factors
propane				
	-		0.001 mg/l	Assessment Factors
	-	Fresh water sediment	0.996 mg/kg dwt	Equilibrium Partitioning
	-	Marine water sediment	0.1 mg/kg dwt	Equilibrium Partitioning
	-	Soil	0.196 mg/kg dwt	Equilibrium Partitioning
	-	Sewage Treatment Plant	10 mg/l	Assessment Factors
	-	Secondary Poisoning	11 mg/kg	Assessment Factors
xylene	-	Fresh water	0.327 mg/l	-
	-	Marine water	0.327 mg/l	-
	-		6.58 mg/l	-
	-	Fresh water sediment	12.46 mg/kg dwt	-
	-	Marine water sediment	12.46 mg/kg dwt	-
	-	Soil	2.31 mg/kg	-
1-methoxy-2-propanol	-	Fresh water	10 mg/l	Assessment Factors
	-	Marine water	1 mg/l	Assessment Factors
	-		100 mg/l	Assessment Factors
	-	Fresh water sediment	41.6 mg/kg	Equilibrium Partitioning
	-	Marine water sediment	4.17 mg/kg	Equilibrium Partitioning
	-	Soil	2.47 mg/kg	Equilibrium Partitioning
ethylbenzene	-	Fresh water	0.1 mg/l	Assessment Factors
	-		0.01 mg/l	Assessment Factors
	-		9.6 mg/l	Assessment Factors
	-	Fresh water sediment	13.7 mg/kg dwt	Equilibrium Partitioning
	-	Marine water sediment	1.37 mg/kg dwt	Equilibrium Partitioning
	-	Soil	2.68 mg/kg dwt	Equilibrium Partitioning
	-	Secondary Poisoning	20 mg/kg	-
trizinc bis(orthophosphate)	-	Fresh water	20.6 μg/l	Sensitivity Distribution
	-		6.1 µg/l	Sensitivity Distribution
	-		100 μg/l	Assessment Factors
	-	Fresh water sediment	117.8 mg/kg dwt	Sensitivity Distribution
	-	Marine water sediment	56.5 mg/kg dwt	Equilibrium Partitioning
	-	Soil	35.6 mg/kg dwt	Sensitivity Distribution

8.2 Exposure controls

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Skin protection

Hand protection :

: Chemical splash goggles. Use eye protection according to EN 166.

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SECTION 8: Exposure controls/personal protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Gloves : butyl rubber

Body protection : Personal protective equipment for the body should be selected based on the task

being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Other skin protection Appropriate footwear and any additional skin protection measures should be selected

based on the task being performed and the risks involved and should be approved by

a specialist before handling this product.

Respiratory protection: 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 workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and

particulate filter P3

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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.
Colour : Beige.

Odour : Aromatic. [Slight]
Odour threshold : Not available.

Melting point/freezing point : May start to solidify at the following temperature: 8 to 12°C (46.4 to 53.6°F) This is

based on data for the following ingredient: bis-[4-(2,3-epoxipropoxi)phenyl]propane.

Weighted average: -26.2°C (-15.2°F)

Initial boiling point and

boiling range

: >37.78°C

Flammability : Not available.

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SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits

: Greatest known range: Lower: 1.48% Upper: 13.74% (1-methoxy-2-propanol)

Flash point

Auto-ignition temperature

Ingredient name	°C	°F	Method
1-methoxy-2-propanol	270	518	

Decomposition temperature

: Stable under recommended storage and handling conditions (see Section 7).

Not applicable. insoluble in water.

Viscosity

: Kinematic (room temperature): >400 mm²/s

Kinematic (40°C): >21 mm²/s

Viscosity

: > 100 s (ISO 6mm)

Closed cup: 38°C

Solubility(ies)

Media	Result
cold water	Not soluble

Partition coefficient: n-octanol/ : Not applicable.

water

Vapour pressure

	Vapou	ır Pressu	re at 20°C	Vapour pressure at 50°C		
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
e thylbenzene	9.30076	1.2				

Evaporation rate

: Highest known value: 0.84 (ethylbenzene) Weighted average: 0.61compared with butyl acetate

Relative density

: 1.7

Vapour density

Highest known value: 11.7 (Air = 1) (bis-[4-(2,3-epoxipropoxi)phenyl]propane). Weighted average: 8.34 (Air = 1)

Explosive properties

: The product itself is not explosive, but the formation of an explosible mixture of vapour or dust with air is possible.

Oxidising properties

: Product does not present an oxidizing hazard.

Particle characteristics

Median particle size

: Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

: No specific test data related to reactivity available for this product or its ingredients. 10.1 Reactivity

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 : When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.

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SECTION 10: Stability and reactivity

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products

: Depending on conditions, 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 <u>Acute toxicity</u>

Product/ingredient name	Result	Species	Dose	Exposure
s-[4-(2,3-epoxipropoxi)phenyl]propane	LD50 Dermal	Rabbit	23000 mg/kg	-
	LD50 Oral	Rat	15000 mg/kg	-
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
benzyl alcohol	LC50 Inhalation Dusts and	Rat	>4178 mg/m ³	4 hours
	mists			
	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1.23 g/kg	-
Phenol, styrenated	LD50 Dermal	Rabbit	>5010 mg/kg	-
•	LD50 Oral	Rat	3550 mg/kg	-
1-methoxy-2-propanol	LC50 Inhalation Vapour	Rat	>7000 ppm	6 hours
	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	5.2 g/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat	17.8 mg/l	4 hours
•	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
oxirane, mono[(C12-14-alkyloxy)methyl]	LD50 Oral	Rat	17100 mg/kg	-
derivs.				
trizinc bis(orthophosphate)	LC50 Inhalation Dusts and	Rat	>5.7 mg/l	4 hours
	mists			
	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary

: There are no data available on the mixture itself.

Acute toxicity estimates

Route	ATE value
Ø ral	49447.24 mg/kg
Dermal	29780.14 mg/kg
Inhalation (vapours)	173.5 mg/l
Inhalation (dusts and mists)	60.3 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
s-[4-(2,3-epoxipropoxi)phenyl]propane	Eyes - Mild irritant	Rabbit	-	24 hours	-
	Eyes - Redness of the	Rabbit	0.4	24 hours	-
	conjunctivae				
	Skin - Oedema	Rabbit	0.5	4 hours	-
	Skin - Erythema/Eschar	Rabbit	0.8	4 hours	-
	Skin - Mild irritant	Rabbit	-	4 hours	-
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

Conclusion/Summary

SkinThere are no data available on the mixture itself.EyesThere are no data available on the mixture itself.

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SECTION 11: Toxicological information

Respiratory: There are no data available on the mixture itself.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
s-[4-(2,3-epoxipropoxi)phenyl]propane	skin	Mouse	Sensitising
Phenol, styrenated	skin	Mouse	Sensitising
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	skin	Guinea pig	Sensitising

Conclusion/Summary

Skin : There are no data available on the mixture itself.Respiratory : There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary: There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary: There are no data available on the mixture itself.

Reproductive toxicity

Conclusion/Summary: There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary: There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3		Respiratory tract irritation
1-methoxy-2-propanol	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs

Aspiration hazard

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

: Not available.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.Ingestion : No known significant effects or critical hazards.

Skin contact: Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.

Eye contact : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: No specific data.Ingestion: No specific data.

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SECTION 11: Toxicological information

Skin contact: Adverse symptoms may include the following:

irritation redness dryness cracking

Eye contact: Adverse symptoms may include the following:

pain or irritation watering redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate

: Not available.

effects

Potential delayed effects: Not available.

Long term exposure

Potential immediate

: Not available.

effects

Potential delayed effects: Not available.

Potential chronic health effects

Not available.

Conclusion/Summary: Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or

dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently

exposed to very low levels.

Carcinogenicity
 Mo known significant effects or critical hazards.
 No known significant effects or critical hazards.
 Reproductive toxicity
 No known significant effects or critical hazards.

Other information : Not available.

Prolonged or repeated contact may dry skin and cause irritation. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

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SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure
vis-[4-(2,3-epoxipropoxi)phenyl]propane visit visit	Acute LC50 1.8 mg/l Fresh	Daphnia - daphnia	48 hours
	water	magna	
	Chronic NOEC 0.3 mg/l	Daphnia	21 days
Phenol, styrenated	Acute EC50 3.8 mg/l	Daphnia	48 hours
1-methoxy-2-propanol	Acute LC50 23300 mg/l	Daphnia	48 hours
	Acute LC50 >4500 mg/l	Fish	96 hours
	Fresh water		
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh	Daphnia -	_
	water	Ceriodaphnia dubia	
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	LC50 >100 mg/l	Fish	96 hours
trizinc bis(orthophosphate)	Acute LC50 0.112 mg/l	Fish	96 hours
	Chronic NOEC 0.026 mg/l	Fish	30 days

Conclusion/Summary: There are no data available on the mixture itself.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Phenol, styrenated	OECD 301F	7 % - Not readily - 28 days	-	-
ethylbenzene	-	79 % - Readily - 10 days	-	-

Conclusion/Summary: There are no data available on the mixture itself.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ĭs-[4-(2,3-epoxipropoxi)phenyl]propane	-	-	Not readily
xylene	-	-	Readily
benzyl alcohol	-	-	Readily
Phenol, styrenated	-	-	Not readily
ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
⋉ylene	3.12	7.4 to 18.5	Low
benzyl alcohol	0.87	-	Low
1-methoxy-2-propanol	<1	-	Low
ethylbenzene	3.6	79.43	Low
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	3.77	-	Low

12.4 Mobility in soil

Soil/water partition : Not available.

coefficient (Koc)

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

Not available.

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SECTION 12: Ecological information

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal

: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste

Yes.

European waste catalogue (EWC)

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

Packaging

Methods of disposal

: 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.

Type of packaging	European waste catalogue (EWC)	
Container	15 01 06	mixed packaging

Special precautions

: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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14. Transport information

English (GB)

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

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14. Transport information

Not applicable. **Marine pollutant** Not applicable. (bis-[4-Not applicable. (2,3-epoxipropoxi) substances phenyl]propane)

Additional information

ADR/RID : This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in

packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and

4.1.1.4 to 4.1.1.8 according to 2.2.3.1.5.2.

Tunnel code : (D/E)

: This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in **ADN**

packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and

4.1.1.4 to 4.1.1.8 according to 2.2.3.1.5.2.

: This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in **IMDG**

packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and

4.1.1.4 to 4.1.1.8 according to 2.3.2.5.

: The environmentally hazardous substance mark may appear if required by other transportation IATA

regulations.

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

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions: Not applicable.

on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

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SECTION 15: Regulatory information

Category	
P5c E2	

15.2 Chemical safety assessment

: No Chemical Safety Assessment has been carried out.

assessillelli

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

PBT = Persistent, Bioaccumulative and Toxic

vPvB = Very Persistent and Very Bioaccumulative

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

IMDG = International Maritime Dangerous Goods

IATA = International Air Transport Association

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
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.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Full text of classifications [CLP/GHS]

Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 2 Aquatic Chronic 3 Aquatic Chronic 4 Asp. Tox. 1 Eye Irrit. 2 Flam. Liq. 2 Flam. Liq. 3	ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4 ASPIRATION HAZARD - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORPOSION/IRRITATION - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2

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SECTION 16: Other information

Skin Sens. 1
Skin Sens. 1
Skin Sens. 1B
STOT RE 2
STOT SE 3

SKIN SENSITISATION - Category 1
SKIN SENSITISATION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

History

Date of issue/ Date of : 15 March 2024

revision

Date of previous issue : 10 August 2023

Prepared by : EHS Version : 1.04

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