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

SAFETY DATA SHEET



EPINOX 21 - TO-950 METALLIC GREY

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

1.1 Product identifier

Product name : EPINOX 21 - TO-950 METALLIC GREY

1.2 Relevant identified uses of the substance or mixture and uses advised againstProduct use: Paint.

1.3 Details of the supplier of the safety data sheet

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091. e-mail address of person : Prod-safe@teknos.com responsible for this SDS

National contact

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : National Poisons Information Centre: 01 809 2566

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]

Fam. Liq. 3, H226 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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.

Warning

2.2 Label elements

Signal word

Hazard pictograms



Signal word	arning	
Hazard statements	317 - May cau 319 - Causes s	ble liquid and vapour. se an allergic skin reaction. serious eye irritation. c to aquatic life with long lasting effects.
Precautionary statements		
Prevention	210 - Keep aw ources. No smo 273 - Avoid rel	otective gloves. Wear eye or face protection. ay from heat, hot surfaces, sparks, open flames and other ignition oking. ease to the environment. eathing vapour.

Date of issue/Date of revision	:07/06/2023	Date of previous issue	: 23/09/2022	Version	:2	1/17
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SECTION 2: Hazards identification

Response	:	P391 - Collect spillage.
Storage	:	Not applicable.
Disposal	:	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	:	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)]bis[oxirane
Supplemental label elements	:	
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	
2.3 Other hazards		
Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	:	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do		None known.

not result in classification

SECTION 3: Composition/information on ingredients

Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Туре
REACH #: 01-2119467174-37 EC: 231-175-3 CAS: 7440-66-6	≥75 - ≤90	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≤10	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]
CAS: 25036-25-3	≤6	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	-	[1]
REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1	≤2.2	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	-	[1] [2]
REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≤1.6	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 (oral, inhalation) Asp. Tox. 1, H304	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/ I	[1] [2]
	REACH #: 01-2119467174-37 EC: 231-175-3 CAS: 7440-66-6 REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1 CAS: 25036-25-3 REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1 REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7	REACH #: 01-2119467174-37 EC: 231-175-3 CAS: 7440-66-6 $\geq 75 - \leq 90$ REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1 ≤ 10 CAS: 25036-25-3 ≤ 6 REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1 ≤ 2.2 REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 ≤ 1.6	REACH #: ≥75 - ≤90 Aquatic Acute 1, H400 01-2119467174-37 ≥75 - ≤90 Aquatic Chronic 1, H410 CAS: 7440-66-6 Flam. Liq. 3, H226 REACH #: ≤10 Flam. Liq. 3, H226 01-2119485493-29 ≤10 Flam. Liq. 3, H226 CAS: 123-86-4 Index: 607-025-00-1 Stor SE 3, H336 CAS: 25036-25-3 ≤6 Skin Irrit. 2, H315 EYe Irrit. 2, H319 Skin Sens. 1, H317 REACH #: 01-2119484609-23 ≤2.2 CAS: 78-83-1 Index: 603-108-00-1 REACH #: 01-2119484216-32 CAS: 78-83-1 ≤1.6 REACH #: ≤1.6 O1-2119488216-32 ≤1.6 CAS: 1330-20-7 Index: 601-022-00-9 Index: 601-022-00-9 STOT SE 3, H335 STOT SE 2, H373 Stor SE 3, H335	Indentitiers % Classification Limits, M-factors and ATEs REACH #: ≥75 - ≤90 Aquatic Acute 1, H400 M [Acute] = 1 01-2119467174-37 ≥75 - ≤90 Aquatic Chronic 1, H410 M [Chronic] = 1 CAS: 7440-66-6 ≤10 Flam. Liq. 3, H226 - REACH #: ≤10 Flam. Liq. 3, H226 - O1-2119485493-29 ≤10 Flam. Liq. 3, H226 - CAS: 123-86-4 Index: 607-025-00-1 Skin Irrit. 2, H315 - CAS: 123-86-4 EUH066 - - Index: 607-025-00-1 ≤6 Skin Irrit. 2, H315 - CAS: 123-86-4 STOT SE 3, H335 - - NIMERCENT ≤2.2 Flam. Liq. 3, H226 - Strin Irrit. 2, H315 Eye Dam. 1, H318 - CAS: 78-83-1 STOT SE 3, H335 - Index: 603-108-00-1 ≤1.6 Flam. Liq. 3, H226 - REACH #: 01-2119488216-32 ≤1.6 Flam. Liq. 3, H226 - CAS: 1330-20-7 Index: 601-022-00-9 STOT

SECTION 3⁻ Composition/information on ingredients

SECTION 5. Composition/mornation on ingredients							
Solvent naphtha (petroleum), light aromatic	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6 Index: 649-356-00-4	≤2.4	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066 See Section 16 for the full text of the H statements declared above.	-	[1]		

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.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	:	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
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

Over-exposure signs/sym	i <u>toms</u>
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
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SECTION 4: First aid	d measures
Ingestion	: No specific data.
4.3 Indication of any immed	iate 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: Firefigh	ting measures
5.1 Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , 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 very 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 dioxide carbon monoxide halogenated compounds metal oxide/oxides
5.3 Advice for firefighters	
Special protective actions 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, pro	ote	ctive 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 non-emergency 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

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	: Fut 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 hydiene measures.

7.2 Conditions for safe storage, including any incompatibilities

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.

Seveso Directive - Reporting thresholds

Danger criteria

	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne
E1	100 tonne	200 tonne

7.3 Specific end use(s)

: Not available.

Recommendations Industrial sector specific solutions

: Not available.

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Date of previous issue

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
p -Butyl acetate	NAOSH (Ireland, 5/2021). Notes: EU derived Occupational
	Exposure Limit Values
	OELV-8hr: 50 ppm 8 hours.
	OELV-8hr: 241 mg/m ³ 8 hours.
	OELV-15min: 150 ppm 15 minutes.
	OELV-15min: 723 mg/m ³ 15 minutes.
iso-butanol	NAOSH (Ireland, 5/2021). Notes: Advisory Occupational
	Exposure Limit Values (OELVs)
	OELV-8hr: 50 ppm 8 hours.
	OELV-8hr: 150 mg/m ³ 8 hours.
	OELV-15min: 75 ppm 15 minutes.
	OELV-15min: 225 mg/m ³ 15 minutes.
Xylene	NAOSH (Ireland, 5/2021). [xylene mixed isomers] Absorbed
	through skin. Notes: EU derived Occupational Exposure Limit
	Values
	OELV-8hr: 50 ppm 8 hours.
	OELV-8hr: 221 mg/m ³ 8 hours.
	OELV-15min: 100 ppm 15 minutes.
	OELV-15min: 442 mg/m ³ 15 minutes.

Biological exposure indices

Product/ingredient name	Exposure indices
▼ylene	NAOSH (Ireland, 1/2011) [Xylene] BMGV: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases.
procedures Europe assessivalues atmosp	nce should be made to monitoring standards, such as the following: an Standard EN 689 (Workplace atmospheres - Guidance for the ment of exposure by inhalation to chemical agents for comparison with limit and measurement strategy) European Standard EN 14042 (Workplace heres - Guide for the application and use of procedures for the assessment sure to chemical and biological agents) European Standard EN 482

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/DMELs

Product/ingredient name	Туре	Exposure	Value	Population	Effects
Zinc powder - zinc dust (stabilized)	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
n-Butyl acetate	DNEL	Short term Oral	2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	2 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	6 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	11 mg/kg	Workers	Systemic

Label No :34593

			bw/day		
	DNEL	Long term	35.7 mg/m ³	General	Local
	DIVEL	Inhalation	00.7 mg/m	population	Loodi
	DNEL	Short term	300 mg/m ³	General	Local
	DIVLL	Inhalation	ooo mg/m	population	Loodi
	DNEL	Short term	300 mg/m ³	General	Systemic
	DINCL	Inhalation	ooo mg/m	population	Oysternie
	DNEL	Long term	300 mg/m ³	Workers	Local
	DINCL	Inhalation	500 mg/m	VVOIKEI3	LUCAI
	DNEL	Short term	600 mg/m ³	Workers	Local
	DIVEL	Inhalation	ooo mg/m	Wonters	Loodi
	DNEL	Short term	600 mg/m ³	Workers	Systemic
		Inhalation	000 mg/m	VVOIKEI3	Oysternic
	DNEL	Long term Dermal	3.4 mg/kg	General	Systemic
		Long term Derma	bw/day	population	Oysternic
	DNEL	Long term Dermal	7 mg/kg	Workers	Systemic
	DINEL	Long term Derma	bw/day	WOIKEIS	Systemic
	DNEL	Long torm		Conorol	Svetemie
	DINEL	Long term Inhalation	12 mg/m ³	General population	Systemic
	DNEL		$18 ma/m^3$	Workers	Systemia
	DINEL	Long term Inhalation	48 mg/m ³	WUIKEIS	Systemic
ing hutanal	DNEL		55 ma/m ³	Conorol	
iso-butanol	DINEL	Long term Inhalation	55 mg/m³	General population	Local
	DNEL		310 mg/m ³	Workers	Local
	DINEL	Long term	STU Hig/III	WOIKEIS	LUCAI
Vulana		Inhalation	$65.2 m g/m^3$	Conorol	
Xylene	DNEL	Long term	65.3 mg/m ³	General	Local
	DNEL	Inhalation	260 mg/m^3	population	
	DINEL	Short term	260 mg/m ³	General	Local
		Inhalation	000 1 3	population	0
	DNEL	Short term	260 mg/m ³	General	Systemic
		Inhalation	004	population	1 1
	DNEL	Long term	221 mg/m ³	Workers	Local
		Inhalation	10 5	0	O un tra maile
	DNEL	Long term Oral	12.5 mg/	General	Systemic
		1	kg bw/day	population	
	DNEL	Long term	65.3 mg/m ³	General	Systemic
		Inhalation	105	population	O un tra una la
	DNEL	Long term Dermal	125 mg/kg	General	Systemic
			bw/day	population	0
	DNEL	Long term Dermal	212 mg/kg	Workers	Systemic
		1	bw/day		0
	DNEL	Long term	221 mg/m ³	Workers	Systemic
		Inhalation	110	\ A / =	1
	DNEL	Short term	442 mg/m ³	Workers	Local
		Inhalation	110	\ A / =	Question
	DNEL	Short term	442 mg/m ³	Workers	Systemic
		Inhalation	0.44	0	Question
Solvent naphtha (petroleum), light	DNEL	Long term	0.41 mg/m ³		Systemic
aromatic		Inhalation	10 1 2	population	
	DNEL	Long term	1.9 mg/m³	Workers	Systemic
	_	Inhalation	470		
	DNEL	Long term	178.57 mg/	General	Local
	_	Inhalation	m ³	population	
	DNEL	Short term	640 mg/m ³	General	Local
	_	Inhalation	007 - ·	population	
	DNEL	Long term	837.5 mg/	Workers	Local
		Inhalation	m ³		
	DNEL	Short term	1066.67	Workers	Local
		Inhalation	mg/m³		
	DNEL	Short term	1152 mg/	General	Systemic
	1	Inhalation	m³	population	
	DNEL	Short term	1286.4 mg/	Workers	Systemic
	1	Inhalation	m³		

PNECs

No PNECs available

Date of issue/Date of revision

SECTION 8: Exposure controls/personal protection

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 meas	<u>ires</u>
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	: 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.
Skin protection	
Hand 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.
	Recommendations : Wear suitable gloves tested to EN374.
	< 1 hour (breakthrough time): Nitrile gloves. thickness > 0.3 mm
	> 8 hours (breakthrough time): 4H / Silver Shield® gloves.
	Wash hands before breaks and immediately after handling the product.
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 anti-static 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	: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
	Filter type: A Filter type (spray application): A P
Environmental exposure controls	 Filter type (spray application): A P 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

<u>Appearance</u>	
Physical state	: Liquid.
Colour	: Grey.
Odour	: Slight
Odour threshold	: Not available.
Melting point/freezing point	: Not available.
Initial boiling point and	:
boiling range	

Ingredient name	°C	°F	Method
s o-butanol	108	226.4	OECD 103
n-Butyl acetate	126	258.8	OECD 103

Flammability

: Not available.

Lower and upper explosion : Lower: 0.8% Upper: 7.6%

2

2

2

Flash point

limit

: Closed cup: 23°C (73.4°F)

Auto-ignition temperature

	Ingredient name		°C	°F	Method
	Solvent naphtha (petroleum), light aromatic		280 to 470	536 to 878	
	n-Butyl acetate		415	779	EU A.15
Decomposition temperature : Not ava			ilable.		
р	H : No	t app	olicable.		

Viscosity : Not available.

Solubility(ies) Not available.

Solubility in water	;	Not available.
Partition coefficient: n-octanol/	:	Not applicable.

water

Vapour pressure

	Va	pour Pres	pour Pressure at 20°C			sure at 50°C
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
P-Butyl acetate	11.25	1.5	DIN EN 13016-2			
iso-butanol	<12	<1.6	DIN EN 13016-2			
elative density	: Not	available.	ł			I

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Density	: 3.1 g/cm ³
Vapour density	: Not available.
Explosive properties	: Not available.
Oxidising properties	: Not available.
Particle characteristics	
Median particle size	: Not applicable.

SECTION 10: Stabilit	y 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	: Reactive or incompatible with the following materials: oxidising materials
10.6 Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
R-Butyl acetate	LC50 Inhalation Vapour	Rat	0.74 mg/l	4 hours
	LD50 Dermal	Rabbit	14112 mg/kg	-
	LD50 Oral	Rat	10760 mg/kg	-
iso-butanol	LC50 Inhalation Vapour	Rat	19200 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
Xylene	LC50 Inhalation Vapour	Rat	21.7 mg/l	4 hours
2	LD50 Oral	Rat	4300 mg/kg	-
Solvent naphtha (petroleum), light aromatic	LD50 Oral	Rat	8400 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Route	ATE value	
	66618.69 mg/kg 666.19 mg/l	

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Zinc powder - zinc dust	Skin - Mild irritant	Human	-	72 hours 300	-
(stabilized)				ug l	
n-Butyl acetate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Xylene	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
	Skin - Moderate irritant	Rabbit	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Solvent naphtha (petroleum), light aromatic	Eyes - Mild irritant	Rabbit	-	24 hours 100 uL	-
Conclusion/Summary	: Based on available data, th	ne classification c	riteria are	e not met.	•
<u>Sensitisation</u>					
Conclusion/Summary	: May cause an allergic skin	reaction.			
Mutagenicity					
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SECTION 11: Toxicological information

Conclusion/Summary	: Based on available data, the classification criteria are not met.
Carcinogenicity	
Conclusion/Summary	: B ased on available data, the classification criteria are not met.
Reproductive toxicity	
Conclusion/Summary	: Based on available data, the classification criteria are not met.
Teratogenicity	
Conclusion/Summary	: Based on available data, the classification criteria are not met.
Specific target organ toxici	t <u>y (single exposure)</u>

Product/ingredient name	Category	Route of exposure	Target organs
p-Butyl acetate	Category 3	-	Narcotic effects
iso-butanol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Xylene	Category 3	-	Respiratory tract irritation
Solvent naphtha (petroleum), light aromatic	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient	name	Category	Route of exposure	Target organs
Xylene	Cat	tegory 2	oral, inhalation	-

Aspiration hazard

Product/ingredient name	Result	
₩ylene	ASPIRATION HAZARD - Category 1	
Solvent naphtha (petroleum), light aromatic	ASPIRATION HAZARD - Category 1	

Information on likely routes of exposure	: Not available.	
Potential acute health effect		
Eye contact	: Causes serious eye irritation.	
Inhalation	: No known significant effects or critical hazards.	
Skin contact	: May cause an allergic skin reaction.	
Ingestion	: No known significant effects or critical hazards.	
Symptoms related to the ph	sical, chemical and toxicological characteristics	
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	
Ingestion	: No specific data.	
Delayed and immediate effe	ts as well as chronic effects from short and long-term exposure	
<u>Short term exposure</u>		
Potential immediate effects	: Not available.	
Potential delayed effects	: Not available.	
Long term exposure		
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SECTION 11: Toxicological information

bsequently exposed

11.2 Information on other hazards

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Zínc powder - zinc dust (stabilized)	Acute EC50 106 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential	72 hours
		growth phase	
	Acute EC50 10000 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute IC50 65 µg/l Marine water	Algae - Nitzschia closterium - Exponential growth phase	4 days
	Acute LC50 65 μg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 68 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 12.21 µg/l Marine water	Fish - Periophthalmus waltoni - Adult	96 hours
	Chronic EC10 27.3 μg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Chronic EC10 59.2 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 9 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
	Chronic NOEC 178 µg/l Marine water	Crustaceans - Palaemon elegans	21 days
	Chronic NOEC 2.6 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks
n-Butyl acetate	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
,	Acute LC50 18000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
iso-butanol	Acute LC50 600 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 1030000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1330000 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Solvent naphtha (petroleum), light aromatic		Daphnia	48 hours
.	Acute LC50 9.2 mg/l	Fish	96 hours

Conclusion/Summary : Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
iso-butanol	-	74 % - Readily - 28 days	-	-
Conclusion/Summary : This product has not been tested for biodegradation.				
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SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
iso-butanol	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
p -Butyl acetate	2.3	-	low
iso-butanol	1	-	low
Xylene	3.12	8.1 to 25.9	low
Solvent naphtha (petroleum), light aromatic	-	10 to 2500	high

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.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

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	:	The classification of the product may meet the criteria for a hazardous waste.
European waste catalogue (EWC)	:	080111*, 200127*
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.
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.

	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 (zinc, Solvent naphtha (petroleum), light arom.)	PAINT
14.3 Transport hazard class(es)	3			3
14.4 Packing group	111	111	111	111
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Additional informa	ation	·		
ADR/RID	sizes of a	ironmentally hazardous s ≤5 L or ≤5 kg. code (D/E)	ubstance mark is not requ	ired when transported ir
ADN		ironmentally hazardous s ≤5 L or ≤5 kg.	ubstance mark is not requ	ired when transported ir
		ine pollutant mark is not	required when transported	l in sizes of <5 L or <5 k
IMDG		•		
IATA I4.6 Special preca	: The envi transport utions for : Transport upright a	ironmentally hazardous s tation regulations. ort within user's premis and secure. Ensure that p	substance mark may appea ses: always transport in clo persons transporting the pr	ar if required by other sed containers that are
IATA I4.6 Special precau Jser I4.7 Maritime trans Dulk according to I	: The envi transport utions for : Transpor upright a the even sport in : Not relev	ironmentally hazardous s tation regulations. ort within user's premis	substance mark may appea ses: always transport in clo persons transporting the pr ge.	ar if required by other sed containers that are
IATA 4.6 Special precau Iser 4.7 Maritime trans bulk according to I nstruments	: The envi transport utions for : Transport upright a the even sport in : Not relev MO	ironmentally hazardous s tation regulations. Fort within user's premis and secure. Ensure that p t of an accident or spillag vant/applicable due to na	substance mark may appea ses: always transport in clo persons transporting the pr ge.	ar if required by other sed containers that are
IATA 4.6 Special precauser 4.7 Maritime transpoulk according to Instruments SECTION 15:	: The envi transport utions for : Transport upright a the even sport in : Not relev MO Regulatory info	ironmentally hazardous s tation regulations. ort within user's premis and secure. Ensure that p t of an accident or spillag vant/applicable due to na	substance mark may appea ses: always transport in clo persons transporting the pr ge. ture of the product.	ar if required by other used containers that are oduct know what to do i
IATA 4.6 Special precauser 4.7 Maritime transpulk according to Instruments SECTION 15: 5.1 Safety, health	: The envi transport utions for : Transport upright a the even sport in : Not relev MO Regulatory info	ironmentally hazardous s tation regulations. ort within user's premise and secure. Ensure that p it of an accident or spillag vant/applicable due to na rmation gulations/legislation sp	substance mark may appea ses: always transport in clo persons transporting the pr ge.	ar if required by other used containers that are oduct know what to do i
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IATA 4.6 Special precauser 4.7 Maritime transpoulk according to Instruments SECTION 15: 5.1 Safety, health <u>EU Regulation (EU</u>	: The envi transport utions for : Transport upright a the even Sport in : Not relev MO Regulatory info and environmental re C) No. 1907/2006 (REA	ironmentally hazardous s tation regulations. ort within user's premis and secure. Ensure that p t of an accident or spillag /ant/applicable due to na prmation gulations/legislation sp	substance mark may appea ses: always transport in clo persons transporting the pr ge. ture of the product.	ar if required by other used containers that are oduct know what to do i
IATA 14.6 Special precau user 14.7 Maritime trans oulk according to I nstruments SECTION 15: 15.1 Safety, health EU Regulation (EU Annex XIV - List Annex XIV	: The envi transport utions for : Transport upright a the even Sport in : Not relev MO Regulatory info and environmental re C) No. 1907/2006 (REA	ironmentally hazardous s tation regulations. ort within user's premis and secure. Ensure that p t of an accident or spillag /ant/applicable due to na prmation gulations/legislation sp	substance mark may appea ses: always transport in clo persons transporting the pr ge. ture of the product.	ar if required by other used containers that are oduct know what to do i
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SECTION 15: Regulatory information
Industrial emissions : Listed (integrated pollution prevention and control) - Water
Ozone depleting substances (1005/2009/EU)
Not listed.
Prior Informed Consent (PIC) (649/2012/EU)
Not listed.
Persistent Organic Pollutants Not listed.
<u>Seveso Directive</u> This product is controlled under the Seveso Directive. <u>Danger criteria</u>
Category
P5c E1
International regulations
Chemical Weapon Convention List Schedules I, II & III Chemicals
Not listed.
Montreal Protocol
Not listed.
Stockholm Convention on Persistent Organic Pollutants Not listed.
Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety : This product contains substances for which Chemical Safety Assessments are still assessment required.

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] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration
	RRN = REACH Registration Number SGG = Segregation Group vPvB = Very Persistent and Very Bioaccumulative

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

Classification	Justification
Fam. Liq. 3, H226	On basis of test data
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

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SECTION 16: Other information

Full text of abbreviated H statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
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.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

Cute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic 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
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
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Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

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