AkzoNobel

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

SAFETY DATA SHEET

FRS-40 SEMI-GLOSS BASE NICKEL BRONZE META 0319/8688

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

1.1 Product identifier

Product name : FRS-40 SEMI-GLOSS BASE NICKEL BRONZE META 0319/8688

SDS code : 40928688B

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

Identified uses

Paint. Professional use Industrial use

Uses advised against

All other uses

Product use : Solvent borne coating for interior use.

1.3 Details of the supplier of the safety data sheet

MAPAERO SAS 10, Avenue de la Rijole CS30098 09103 PAMIERS Cedex France

e-mail address of person responsible for this SDS

: PSRA PAMIERS@akzonobel.com

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : +33 (0)1 40 05 48 48

Supplier

Telephone number : +33 (0)5 34 01 34 01

+33 (0)5 61 60 23 30

Hours of operation :

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 Carc. 2, H351 STOT SE 3, H336

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 : Mammable liquid and vapor. Causes serious eye irritation.

May cause drowsiness or dizziness. Suspected of causing cancer.

Precautionary statements

Prevention : Øbtain special instructions before use. Wear protective gloves, protective clothing

> and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing vapor.

: IF exposed or concerned: Get medical advice or attention. IF INHALED: Call a Response

POISON CENTER or doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

: Store in a well-ventilated place. Keep container tightly closed. Keep cool. Storage

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

and international regulations.

Hazardous ingredients : n-butyl acetate

4-methylpentan-2-one

Supplemental label : Contains methyl methacrylate, 4-morpholinecarbaldehyde and Reaction mass of Bis elements

(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction. Repeated exposure may

cause skin dryness or cracking.

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 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 not result in classification : None known.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Туре
p∕-butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≥25 - ≤50	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	[1] [2]
2-methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6	≥10 - ≤25	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
Reaction mass of ethylbenzene and xylene	REACH #: 01-2119488216-32	<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 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1] [2]
ethyl acetate	REACH #: 01-2119475103-46 EC: 205-500-4 CAS: 141-78-6 Index: 607-022-00-5	≤10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
4-methylpentan-2-one	EC: 203-550-1 CAS: 108-10-1 Index: 606-004-00-4	≤5	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 EUH066	[1] [2]
2-ethoxy-1-methylethyl acetate	EC: 259-370-9 CAS: 54839-24-6 Index: 603-177-00-8	≤3	Flam. Liq. 3, H226 STOT SE 3, H336	[1]
isopropyl acetate	REACH #: 01-2119537214-46 EC: 203-561-1 CAS: 108-21-4 Index: 607-024-00-6	≤3	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
methyl methacrylate	REACH #: 01-2119452498-28 EC: 201-297-1 CAS: 80-62-6 Index: 607-035-00-6	<1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]
4-morpholinecarbaldehyde Reaction mass of Bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	CAS: 4394-85-8 REACH #: 01-2119491304-40 EC: 915-687-0 CAS: 1065336-91-5	≤0.3 <0.1	Skin Sens. 1, H317 Skin Sens. 1A, H317 Repr. 2, H361f Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) See Section 16 for	[1]
			the full text of the H statements declared above.	

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SECTION 3: Composition/information on ingredients

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
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

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 it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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 skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 necessary, call a poison center or physician. 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. 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.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit 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. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture 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.

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SECTION 4: First aid measures

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains methyl methacrylate, 4-morpholinecarbaldehyde, Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

pain or irritation

watering redness

Inhalation : Adverse symptoms may include the following:

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness

Skin contact: Adverse symptoms may include the following:

irritation 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

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

: Fammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous combustion products

: Decomposition products may include the following materials:

carbon dioxide carbon monoxide metal oxide/oxides

5.3 Advice for firefighters

Special protective actions

for fire-fighters

: Fromptly 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.

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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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized 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 spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

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 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 noncombustible, 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 spilled product.

6.4 Reference to other sections

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

SECTION 7: Handling and storage

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). Avoid exposure obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. 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.

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SECTION 7: Handling and storage

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. Store locked up. Eliminate all ignition sources. Separate from oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P 5c	5000 tonne	50000 tonne

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific : Not available.

solutions

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
r-butyl acetate	Ministry of Labor (France, 3/2020). Notes: Indicative limit
-	values (circular)
	STEL: 940 mg/m³ 15 minutes. Form: Risk for sensitisation
	STEL: 200 ppm 15 minutes. Form: Risk for sensitisation
	TWA: 710 mg/m³ 8 hours. Form: Risk for sensitisation
	TWA: 150 ppm 8 hours. Form: Risk for sensitisation
2-methoxy-1-methylethyl acetate	Ministry of Labor (France, 10/2016). Absorbed through skin.
	Notes: Labour Act , Art 4412-149 (Regulatory binding
	exposure limits)
	STEL: 550 mg/m³ 15 minutes.
	STEL: 100 ppm 15 minutes.
	TWA: 275 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
Denotion many of other house and values	· ·
Reaction mass of ethylbenzene and xylene	Ministry of Labor (France, 3/2020). Absorbed through skin. Notes: Binding regulatory limit values (article R. 4412-149 of
	the Labor Code)
	STEL: 442 mg/m³ 15 minutes. Form: Risk for sensitisation
	STEL: 100 ppm 15 minutes. Form: Risk for sensitisation
	TWA: 221 mg/m³ 8 hours. Form: Risk for sensitisation
	TWA: 50 ppm 8 hours. Form: Risk for sensitisation
ethyl acetate	Ministry of Labor (France, 3/2020). Notes: Binding regulatory
,	limit values (article R. 4412-149 of the Labor Code)
	TWA: 734 mg/m³ 8 hours. Form: Risk for sensitisation
	TWA: 200 ppm 8 hours. Form: Risk for sensitisation
	Ministry of Labor (France, 3/2020). Notes: Binding regulatory
	limit values (article R. 4412-149 of the Labor Code)
	STEL: 1468 mg/m³ 15 minutes.
	STEL: 400 ppm 15 minutes.
4-methylpentan-2-one	Ministry of Labor (France, 3/2020). Notes: Binding regulatory

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SECTION 8: Exposure controls/personal protection

limit values (article R. 4412-149 of the Labor Code)

STEL: 208 mg/m³ 15 minutes. Form: Risk for sensitisation STEL: 50 ppm 15 minutes. Form: Risk for sensitisation TWA: 83 mg/m³ 8 hours. Form: Risk for sensitisation TWA: 20 ppm 8 hours. Form: Risk for sensitisation

Ministry of Labor (France, 3/2020). Notes: Indicative limit

values (circular)

STEL: 1140 mg/m³ 15 minutes. STEL: 300 ppm 15 minutes. TWA: 950 mg/m³ 8 hours. TWA: 250 ppm 8 hours.

Ministry of Labor (France, 3/2020). Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)

STEL: 410 mg/m³ 15 minutes. Form: Risk for sensitisation STEL: 100 ppm 15 minutes. Form: Risk for sensitisation TWA: 205 mg/m³ 8 hours. Form: Risk for sensitisation TWA: 50 ppm 8 hours. Form: Risk for sensitisation

Recommended monitoring procedures

isopropyl acetate

methyl methacrylate

: 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.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
p-butyl acetate	DNEL	Long term Oral	3.4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3.4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	7 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	12 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	48 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	102.34 mg/ m ³	General population	Local
	DNEL	Long term Inhalation	480 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	859.7 mg/ m ³	General population	Local
	DNEL	Short term Inhalation	859.7 mg/ m ³	General population	Systemic
	DNEL	Short term Inhalation	960 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	960 mg/m³	Workers	Systemic
Reaction mass of ethylbenzene and xylene	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
7,7,55	DNEL	Long term Inhalation	14.8 mg/m ³		Systemic
	DNEL	Long term	77 mg/m³	Workers	Systemic

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SECTION 8: Exposure controls/personal protection

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		Inhalation			
	DNEL	Long term Dermal	108 mg/kg	General	Systemic
			bw/day	population	
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Short term	289 mg/m ³	Workers	Local
	חאבי	Inhalation	280 mg/m3	Markers	Systemis
	DNEL	Short term Inhalation	289 mg/m ³	Workers	Systemic
ethyl acetate	DNEL	Long term Oral	4.5 mg/kg	General	Systemic
Guryr acctate	DINCL	Long term Oral	bw/day	population	Cysternic
	DNEL	Long term Dermal	37 mg/kg	General	Systemic
			bw/day	population	
	DNEL	Long term Dermal	63 mg/kg bw/day	Workers	Systemic
	DNEL	Long term	367 mg/m ³	General	Local
		Inhalation	209,	population	
	DNEL	Long term	367 mg/m ³	General	Systemic
		Inhalation		population	*
	DNEL	Short term	734 mg/m ³	General	Local
		Inhalation	,g,	population	
	DNEL	Short term	734 mg/m ³	General	Systemic
		Inhalation]	population	
	DNEL	Long term	734 mg/m ³	Workers	Local
		Inhalation			
	DNEL	Long term	734 mg/m ³	Workers	Systemic
		Inhalation			_
	DNEL	Short term	1468 mg/	Workers	Local
		Inhalation	m³		
	DNEL	Short term	1468 mg/	Workers	Systemic
		Inhalation	m³		
4-methylpentan-2-one	DNEL	Long term Oral	4.2 mg/kg	General	Systemic
			bw/day	population	
		–			
	DNEL	Long term Dermal	4.2 mg/kg	General	Systemic
			bw/day	General population	
	DNEL DNEL	Long term Dermal	bw/day 11.8 mg/	General	Systemic Systemic
	DNEL	Long term Dermal	bw/day 11.8 mg/ kg bw/day	General population Workers	Systemic
		Long term Dermal	bw/day 11.8 mg/	General population Workers General	
	DNEL	Long term Dermal Long term Inhalation	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³	General population Workers General population	Systemic Local
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	DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³	General population Workers General population General population	Systemic Local Systemic
	DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Long term	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³	General population Workers General population General	Systemic Local
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	DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³	General population Workers General population General population Workers Workers	Systemic Local Systemic Local Systemic
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	DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 155.2 mg/	General population Workers General population General population Workers Workers General population	Systemic Local Systemic Local Systemic
	DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation Short term	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/	General population Workers General population General population Workers Workers General population General population General	Systemic Local Systemic Local Systemic Local Local
	DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/ m³ 208 mg/m³	General population Workers General population General population Workers Workers General population General population General population General population Workers	Systemic Local Systemic Local Systemic Local Systemic Systemic
	DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/ m³	General population Workers General population General population Workers Workers General population General population General population General population	Systemic Local Systemic Local Systemic Local Systemic Systemic
	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/ m³ 208 mg/m³	General population Workers General population General population Workers Workers General population General population General population General population Workers Workers	Systemic Local Systemic Local Systemic Local Systemic Local Systemic Systemic Systemic
2-ethoxy-1-methylethyl acetate	DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 208 mg/m³ 208 mg/m³	General population Workers General population General population Workers Workers General population General population General population General population Workers Workers General	Systemic Local Systemic Local Systemic Local Systemic Local Systemic Local
2-ethoxy-1-methylethyl acetate	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation Company	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/ m³ 208 mg/m³ 208 mg/m³	General population Workers General population General population Workers Workers General population General population General population General population Workers Workers General population Workers	Systemic Local Systemic Local Systemic Local Systemic Local Systemic Systemic Systemic Systemic
2-ethoxy-1-methylethyl acetate	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/ m³ 208 mg/m³ 208 mg/m³	General population Workers General population General population Workers Workers General population General population Workers Workers General population Workers Workers	Systemic Local Systemic Local Systemic Local Systemic Local Systemic Systemic Systemic
2-ethoxy-1-methylethyl acetate	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation Short term Inhalation Short term Inhalation Cong term Inhalation Inhalation Cong term Inhalation Cong term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/ m³ 208 mg/m³ 208 mg/m³ 13.1 mg/ kg bw/day 62 mg/kg bw/day	General population Workers General population General population Workers Workers General population General population Workers Workers General population Workers Workers General population General population General population General population General population	Systemic Local Systemic Local Systemic Local Systemic Local Systemic Systemic Systemic Systemic Systemic Systemic
2-ethoxy-1-methylethyl acetate	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation Company	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/ m³ 208 mg/m³ 208 mg/m³ 13.1 mg/ kg bw/day 62 mg/kg bw/day 103 mg/kg	General population Workers General population General population Workers Workers General population General population Workers Workers General population Workers Workers	Systemic Local Systemic Local Systemic Local Systemic Local Systemic Systemic Systemic
2-ethoxy-1-methylethyl acetate	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation Short term Inhalation Short term Inhalation Long term Oral Long term Dermal Long term Dermal	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/ m³ 208 mg/m³ 208 mg/m³ 13.1 mg/ kg bw/day 62 mg/kg bw/day 103 mg/kg bw/day	General population Workers General population General population Workers Workers General population General population General population Workers Workers Workers General population General population General population General population General population Workers	Systemic Local Systemic Local Systemic Local Systemic Local Systemic Systemic Systemic Systemic Systemic Systemic Systemic Systemic
2-ethoxy-1-methylethyl acetate	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation Short term Inhalation Short term Inhalation Long term Inhalation Long term Inhalation Long term	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/ m³ 208 mg/m³ 208 mg/m³ 13.1 mg/ kg bw/day 62 mg/kg bw/day 103 mg/kg	General population Workers General population General population Workers Workers General population General population General population Workers Workers General population Workers General population General population General population General population General population Workers General General population Workers	Systemic Local Systemic Local Systemic Local Systemic Local Systemic Systemic Systemic Systemic Systemic Systemic
2-ethoxy-1-methylethyl acetate	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	Long term Dermal Long term Inhalation Long term Inhalation Long term Inhalation Long term Inhalation Short term Inhalation Short term Inhalation Short term Inhalation Short term Inhalation Long term Oral Long term Dermal Long term Dermal	bw/day 11.8 mg/ kg bw/day 14.7 mg/m³ 14.7 mg/m³ 83 mg/m³ 83 mg/m³ 155.2 mg/ m³ 155.2 mg/ m³ 208 mg/m³ 208 mg/m³ 13.1 mg/ kg bw/day 62 mg/kg bw/day 103 mg/kg bw/day	General population Workers General population General population Workers Workers General population General population General population Workers Workers Workers General population General population General population General population General population Workers	Systemic Local Systemic Local Systemic Local Systemic Local Systemic Systemic Systemic Systemic Systemic Systemic Systemic Systemic

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

FRS-40 SEMI-GLOSS BASE NICKEL BRONZE META 0319/8688

SECTION 8: Exposure controls/personal protection

ocorron o. Exposure com	010/ P	<u> </u>	011011		
		Inhalation			
	DNEL	Short term	365 mg/m ³	General	Systemic
		Inhalation		population	=
	DNEL	Short term	608 mg/m ³	Workers	Systemic
		Inhalation			_
isopropyl acetate	DNEL	Long term Oral	26 mg/kg	General	Systemic
			bw/day	population	*
	DNEL	Long term Dermal	26 mg/kg	General	Systemic
			bw/day	population	
	DNEL	Long term Dermal	43 mg/kg	Workers	Systemic
			bw/day		-,
	DNEL	Long term	252 mg/m ³	General	Local
		Inhalation	· - · · · · · · · · · · · · · · · · · ·	population	
	DNEL	Long term	252 mg/m ³	General	Systemic
		Inhalation		population	,
	DNEL	Long term	420 mg/m ³	Workers	Local
		Inhalation			=
	DNEL	Long term	420 mg/m ³	Workers	Systemic
		Inhalation	15 111.5.111		,
	DNEL	Short term	510 mg/m ³	General	Systemic
		Inhalation		population	_,
	DNEL	Short term	850 mg/m ³	Workers	Systemic
		Inhalation			_,
methyl methacrylate	DNEL	Long term Dermal	8.2 mg/kg	General	Systemic
, , , ,			bw/day	population	
	DNEL	Long term Dermal	13.67 mg/	Workers	Systemic
			kg bw/day		,
	DNEL	Long term	74.3 mg/m ³	General	Systemic
		Inhalation		population	
	DNEL	Long term	104 mg/m ³	General	Local
		Inhalation		population	
	DNEL	Long term	208 mg/m ³	Workers	Local
		Inhalation	J		
	DNEL	Long term	208 mg/m ³	Workers	Systemic
		Inhalation	J		*
4-morpholinecarbaldehyde	DNEL	Long term Oral	8 mg/kg	General	Systemic
			bw/day	population	
	DNEL	Long term Dermal	8 mg/kg	General	Systemic
			bw/day	population	- ,
	DNEL	Long term Dermal	14 mg/kg	Workers	Systemic
			bw/day		,
	DNEL	Long term	29 mg/m ³	General	Systemic
		Inhalation	g,	population	2,2.00
	DNEL	Long term	98 mg/m³	Workers	Systemic
		Inhalation			_,
]				

PNECs

No PNECs available.

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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

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SECTION 8: Exposure controls/personal protection

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. 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.

When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time >480 minutes according to EN374) is recommended. Recommended gloves: Viton 8 or Nitrile, thickness 2 0.38 mm. When only brief contact is expected, a glove with protection class of 2 or higher (breakthrough time >30 minutes according to EN374) is recommended. Recommended gloves: Nitrile, thickness 2 0.12 mm.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

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.

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.

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.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

: Iquid. Physical state Color : Brown.

Odor Characteristic. : Not available. Odor threshold рH : Not available. Melting point/freezing point : Not available. Initial boiling point and : Not available.

boiling range

Flash point : Closed cup: 28°C **Evaporation rate** : Not available. Flammability (solid, gas) : Not available. Upper/lower flammability or : Not available.

explosive limits

Vapor pressure : Not available.

Vapor density : Highest known value: 4.6 (Air = 1) (2-methoxy-1-methylethyl acetate).

Weighted average: 3.88 (Air = 1)

Density : 0.996 g/cm³

: Insoluble in the following materials: cold water. Solubility(ies)

Partition coefficient: n-octanol/: Not available.

water

Auto-ignition temperature : Not available. **Decomposition temperature** : Not available.

Viscosity : Kinematic (room temperature): 10.04 cm²/s

Kinematic (40°C): 1.01 cm²/s

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 : Kvoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld,

braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials : Reactive or incompatible with the following materials:

oxidizing materials

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<mark>ଜ-</mark> butyl acetate	LC50 Inhalation Gas.	Rat	390 ppm	4 hours
	LC50 Inhalation Vapor	Mouse	6 g/m³	2 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Intraperitoneal	Mouse	1230 mg/kg	-
	LD50 Oral	Guinea pig	4700 mg/kg	-
	LD50 Oral	Mouse	6 g/kg	-
	LD50 Oral	Rabbit	3200 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
Reaction mass of ethylbenzene and xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
ethyl acetate	LC50 Inhalation Gas.	Rat	1600 ppm	8 hours
	LC50 Inhalation Vapor	Mouse	45 g/m ³	2 hours
	LD50 Intraperitoneal	Mouse	709 mg/kg	-
	LD50 Oral	Guinea pig	5.5 g/kg	-
	LD50 Oral	Guinea pig	5500 mg/kg	-
	LD50 Oral	Mouse	4.1 g/kg	-
	LD50 Oral	Mouse	4100 mg/kg	-
	LD50 Oral	Rabbit	4935 mg/kg	-
	LD50 Oral	Rat	5620 mg/kg	-
	LD50 Subcutaneous	Guinea pig	3 g/kg	-
4-methylpentan-2-one	LD50 Intraperitoneal	Guinea pig	800 mg/kg	-
	LD50 Intraperitoneal	Mouse	268 mg/kg	-
	LD50 Intraperitoneal	Rat	400 mg/kg	-
	LD50 Oral	Guinea pig	1600 mg/kg	-
	LD50 Oral	Mouse	1900 mg/kg	-
	LD50 Oral	Mouse	2850 mg/kg	-
	LD50 Oral	Rat	2080 mg/kg	-
	LD50 Oral	Rat	4600 mg/kg	-
isopropyl acetate	LC50 Inhalation Vapor	Rat	50600 mg/m ³	8 hours
	LD50 Oral	Rabbit	6946 mg/kg	-
	LD50 Oral	Rat	6750 mg/kg	-
methyl methacrylate	LC50 Inhalation Vapor	Mouse	18500 mg/m ³	2 hours
	LC50 Inhalation Vapor	Rat	78000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Intraperitoneal	Guinea pig	1890 mg/kg	-
	LD50 Intraperitoneal	Mouse	945 mg/kg	-
	LD50 Intraperitoneal	Rat	1328 mg/kg	-
	LD50 Oral	Guinea pig	5954 mg/kg	-
	LD50 Oral	Mouse	3625 mg/kg	-
	LD50 Oral	Rabbit	8700 mg/kg	-
	LD50 Oral	Rat	7872 mg/kg	-
	LD50 Subcutaneous	Guinea pig	5954 mg/kg	-
	LD50 Subcutaneous	Mouse	5954 mg/kg	-
	LD50 Subcutaneous	Rat	7088 mg/kg	-
4-morpholinecarbaldehyde	LD50 Oral	Rat	6500 uL/kg	-

Conclusion/Summary

: Not available.

Irritation/Corrosion

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SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-butyl acetate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500	-
				mg	
Reaction mass of	Eyes - Mild irritant	Rabbit	-	87 mg	-
ethylbenzene and xylene					
	Eyes - Severe irritant	Rabbit	-	24 hours 5	-
				mg	
	Skin - Mild irritant	Rat	-	8 hours 60 UI	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500	-
				mg	
	Skin - Moderate irritant	Rabbit	-	100 %	-
4-methylpentan-2-one	Eyes - Moderate irritant	Rabbit	-	24 hours 100	-
				UI	
	Eyes - Severe irritant	Rabbit	-	40 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500	-
				mg	
isopropyl acetate	Skin - Mild irritant	Rabbit	-	24 hours 500	-
		5		mg	
4-morpholinecarbaldehyde	Eyes - Mild irritant	Rabbit	-	24 hours 500	-
		D 11.7		mg	
	Skin - Mild irritant	Rabbit	-	24 hours 500	-
				mg	

Conclusion/Summary

: Not available.

Sensitization

Conclusion/Summary

: Not available.

Mutagenicity

Conclusion/Summary

: Not available.

Carcinogenicity

Conclusion/Summary

: Not available.

Reproductive toxicity

Conclusion/Summary

: Not available.

Teratogenicity

Conclusion/Summary: Not available. **Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
<mark>ਯ-</mark> butyl acetate	Category 3	-	Narcotic effects
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
Reaction mass of ethylbenzene and xylene	Category 3	-	Respiratory tract irritation
ethyl acetate	Category 3	-	Narcotic effects
4-methylpentan-2-one	Category 3	-	Narcotic effects
2-ethoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
isopropyl acetate	Category 3	-	Narcotic effects
methyl methacrylate	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Reaction mass of ethylbenzene and xylene	Category 2	-	-

Aspiration hazard

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SECTION 11: Toxicological information

Product/ingredient name	Result
Reaction mass of ethylbenzene and xylene	ASPIRATION HAZARD - Category 1

Information on the likely

: Not available.

routes of exposure

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or

dizziness.

Skin contact: Defatting to the skin. May cause skin dryness and irritation.

Ingestion: Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : Adverse symptoms may include the following:

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness

Skin contact: Adverse symptoms may include the following:

irritation dryness cracking

Ingestion : No specific data.

Delayed and immediate effects and also 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.

Carcinogenicity: Suspected of causing cancer. Risk of cancer depends on duration and level of

exposure.

Mutagenicity : No known significant effects or critical hazards.Reproductive toxicity : No known significant effects or critical hazards.

Other information : Not available.

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SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself.

Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is not classified as hazardous to the environment, but contains substance(s) hazardous to the environment. See section 3 for details.

Product/ingredient name	Result	Species	Exposure
<mark>r</mark> -butyl acetate	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 100000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 18000 μg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 185000 µg/l Marine water	Fish - Menidia beryllina	96 hours
	Acute LC50 62000 µg/l Fresh water	Fish - Danio rerio	96 hours
Reaction mass of	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
ethylbenzene and xylene			
ethyl acetate	Acute EC50 2500000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 1600000 µg/l Fresh water	Crustaceans - Asellus aquaticus	48 hours
	Acute LC50 750000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 175000 µg/l Fresh water	Daphnia - Daphnia cucullata	48 hours
	Acute LC50 154000 µg/l Fresh water	Daphnia - Daphnia cucullata	48 hours
	Acute LC50 560000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 230000 µg/l Fresh water	Daphnia - Daphnia pulex	48 hours
	Acute LC50 295000 µg/l Fresh water	Daphnia - Daphnia pulex	48 hours
	Acute LC50 230000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 212500 µg/l Fresh water	Fish - Heteropneustes fossilis	96 hours
	Acute LC50 484000 µg/l Fresh water	Fish - Oncorhynchus mykiss -	96 hours
	7 touto 2000 10 1000 µg/11 10011 Water	Juvenile (Fledgling, Hatchling,	oo noaro
		Weanling)	
	Acute LC50 425300 µg/l Fresh water	Fish - Oncorhynchus mykiss -	96 hours
	Acute 2000 420000 µg/11 resit water	Juvenile (Fledgling, Hatchling,	30 Hours
		Weanling)	
	Chronic NOEC 12 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 12 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 75.6 mg/l Fresh water	Fish - Pimephales promelas -	32 days
4 mathylpopton 2 and	A cuto I CEO E0E000 ug/l Freeb water	Embryo	OG bours
4-methylpentan-2-one	Acute LC50 505000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 540000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 537000 µg/l Fresh water	Fish - Pimephales promelas -	96 hours
		Juvenile (Fledgling, Hatchling,	
	0, 1,050.70 %5 , 1	Weanling)	04.1
	Chronic NOEC 78 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas -	33 days
		Embryo	
isopropyl acetate	Acute LC50 110 mg/l Marine water	Crustaceans - Artemia salina	48 hours
methyl methacrylate	Acute LC50 191000 µg/l Fresh water	Fish - Lepomis macrochirus -	96 hours
		Juvenile (Fledgling, Hatchling,	
		Weanling)	
	Acute LC50 159100 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 160200 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 150000 µg/l Fresh water	Fish - Pimephales promelas -	96 hours
		Adult	
	Acute LC50 130000 µg/l Fresh water	Fish - Pimephales promelas -	96 hours
		Adult	

Conclusion/Summary

: Not available.

12.2 Persistence and degradability

Conclusion/Summary: Not available.

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SECTION 12: Ecological information

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
<mark>ਯ</mark> -butyl acetate	2.3	-	low
2-methoxy-1-methylethyl acetate	1.2	-	low
Reaction mass of ethylbenzene and xylene	3.12	8.1 to 25.9	low
ethyl acetate	0.68	30	low
4-methylpentan-2-one	1.9	-	low
2-ethoxy-1-methylethyl acetate	0.76	-	low
isopropyl acetate	1.3	-	low
methyl methacrylate	1.38	-	low
4-morpholinecarbaldehyde	-	<1.9	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc})

: Not available.

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 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 minimized 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.

Disposal considerations

: Do not allow to enter drains or watercourses.

Dispose of according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no

longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

Waste code	Waste designation
EWC 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 minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

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SECTION 13: Disposal considerations

Disposal considerations

: Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers.

Empty containers must be scrapped or reconditioned.

Dispose of containers contaminated by the product in accordance with local or

national legal provisions.

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. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	⊮ N1263	⊮ N1263	№ N1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	8	3	3
14.4 Packing group	INT .	III.	ĮIT
14.5 Environmental hazards	No.	No.	No.

Additional information

ADR/RID

: Viscous liquid exception This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.2.3.1.5.1.

Tunnel code (D/E)

IMDG

: Emergency schedules F-E, S-E

Viscous liquid exception This class 3 viscous liquid is not subject to regulation in

packagings up to 450 L according to 2.3.2.5.

14.6 Special precautions for : 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 Transport in bulk according to IMO instruments

: Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

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SECTION 15: Regulatory information

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

Other EU regulations

VOC : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the

product label and/or technical data sheet for further information.

VOC for Ready-for-Use

Mixture

: Not applicable.

: Not listed

: Not listed

Industrial emissions (integrated pollution

prevention and control) -

Air

Industrial emissions (integrated pollution

prevention and control) -

Water

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

P5c

National regulations

Industrial use : The information contained in this safety data sheet does not constitute the user's

own assessment of workplace risks, as required by other health and safety

legislation. The provisions of the national health and safety at work regulations apply

to the use of this product at work.

Social Security Code,

Articles L 461-1 to L 461-7

: n-butyl acetate **RG 84**

Reaction mass of ethylbenzene and xylene RG 4bis, RG 84

ethyl acetate **RG 84** 4-methylpentan-2-one **RG 84** isopropyl acetate **RG 84** methyl methacrylate **RG 82**

Reinforced medical surveillance

: Decree n ° 2012-135 of January 30, 2012 relating to the organization of

occupational medicine: not applicable

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)

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SECTION 15: Regulatory information

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Europe : Not determined.

15.2 Chemical Safety

Assessment

: No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and

: ATE = Acute Toxicity Estimate

acronyms

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
Carc. 2, H351	Calculation method
STOT SE 3, H336	Calculation method

Full text of abbreviated H statements

⊮ 225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
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.
H351	Suspected of causing cancer.
H361f	Suspected of damaging fertility.
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.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

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

FRS-40 SEMI-GLOSS BASE NICKEL BRONZE META 0319/8688

SECTION 16: Other information

Acute Tox. 4 ACUTE TOXICITY - Category 4 AQUATIC HAZARD (ACUTE) - Category 1

Aquatic Chronic 1
Aquatic Chronic 3
Asp. Tox. 1

Aquatic 7 Sategory 1

AQUATIC HAZARD (LONG-TERM) - Category 1

AQUATIC HAZARD (LONG-TERM) - Category 3

ASPIRATION HAZARD - Category 1

ASPIRATION HAZARD - Category 1
CARCINOGENICITY - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

FLAMMABLE LIQUIDS - Category 2
FLAMMABLE LIQUIDS - Category 3
TOXIC TO REPRODUCTION - Category 2
SKIN CORROSION/IRRITATION - Category 2

SKIN SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1A

SPECIFIC TARGET ORGAN TOXICITY (REPEATED

EXPOSURE) - Category 2

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) -

Category 3

Date of printing

Carc. 2

Repr. 2

Eye Irrit. 2

Flam, Liq, 2

Flam. Liq. 3

Skin Irrit. 2

Skin Sens. 1

STOT RE 2

STOT SE 3

Skin Sens. 1A

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Notice to reader

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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