

SAFETY DATA SHEET

Flügger

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

1.1 Product identifier

Trade name : Flügger Metal Pro Metal Enamel

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

Identified uses : Paint.

1.3 Details of the supplier of the safety data sheet

Flügger Denmark A/S
 Islevdalvej 151
 DK-2610 Rødovre
 Tlf. +45 76 30 33 80

e-mail address of person responsible for this SDS : produktsupportdk@flugger.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Call a poison center or physician.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Flam. Liq. 3, H226

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.

2.2 Label elements

Hazard pictograms :**Signal word** : Warning**Hazard statements** : H226 - Flammable liquid and vapour.

Precautionary statements

General : P102 - Keep out of reach of children.

Prevention : P280 - Wear protective gloves and protective clothing.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P261 - Avoid breathing vapour or spray.

Response : Not applicable.**Storage** : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

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

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SECTION 2: Hazards identification

Cloths with the product can self-ignite. Should be saturated with water or destroyed after use.

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.

EU VOC : VOC limit value (Cat. A/i): 500 g/l (2010)
Product VOC: max. 495 g/l

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Hydrocarbons, C10-C13, aromatics	EC: 940-726-3 CAS: 1174522-09-8	≥25 - ≤50	Asp. Tox. 1, H304 EUH066	EUH066: C ≥ 20%	[1]
Naphtha (petroleum), hydrotreated heavy	REACH #: 01-2119463258-33 EC: 265-150-3 CAS: 64742-48-9	≤10	Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 EUH066	EUH066: C ≥ 20%	[1]
Naphtha (petroleum), hydrotreated heavy	REACH #: 01-2119457273-39 EC: 265-150-3 CAS: 64742-48-9	≤3	Asp. Tox. 1, H304 EUH066	EUH066: C ≥ 20%	[1]
2-methoxy-1-methylethyl acetate	EC: 203-603-9 CAS: 108-65-6	<1	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
n-butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4	<1	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]
Naphtha (petroleum), hydrodesulfurized heavy	EC: 265-185-4 CAS: 64742-82-1	≤0,3	Flam. Liq. 3, H226 STOT SE 3, H336 STOT RE 1, H372 (inhalation) Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	EUH066: C ≥ 20%	[1]

SECTION 3: Composition/information on ingredients

strontium bis (2-ethylhexanoate)	EC: 219-536-3 CAS: 2457-02-5 Index: 607-230-00-6	<0,3	Repr. 1B, H360D See Section 16 for the full text of the H statements declared above.	-	[1]
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, 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 skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. 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.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- 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 : 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.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
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, protective equipment and emergency procedures

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

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

6.3 Methods and material 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. Absorb with an inert 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. 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.

SECTION 6: Accidental release measures

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

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

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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. Cloths with the product can self-ignite. Should be saturated with water or destroyed after use.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Do not store above the following temperature: 40°C (104°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonnes	50000 tonnes

7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

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

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
2-methoxy-1-methylethyl acetate	EU OEL (Europe, 1/2022) Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 275 mg/m ³ . STEL 15 minutes: 100 ppm. STEL 15 minutes: 550 mg/m ³ .
n-butyl acetate	EU OEL (Europe, 1/2022) STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m ³ . TWA 8 hours: 241 mg/m ³ . TWA 8 hours: 50 ppm.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : 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

Naphtha (petroleum), hydrotreated heavy

Result

DNEL - Workers - Long term - Inhalation

1500 mg/m³

Effects: Systemic

DNEL - General population - Long term - Oral

300 mg/m³

Effects: Systemic

DNEL - General population - Long term - Dermal

300 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

900 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Dermal

300 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

0,41 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Inhalation

1,9 mg/m³

Effects: Systemic

DNEL - General population - Long term - Inhalation

178,57 mg/m³

Effects: Local

DNEL - General population - Short term - Inhalation

640 mg/m³

SECTION 8: Exposure controls/personal protection

Effects: Local

DNEL - Workers - Long term - Inhalation

837,5 mg/m³

Effects: Local

DNEL - Workers - Short term - Inhalation

1066,67 mg/m³

Effects: Local

DNEL - General population - Short term - Inhalation

1152 mg/m³

Effects: Systemic

DNEL - Workers - Short term - Inhalation

1286,4 mg/m³

Effects: Systemic

Naphtha (petroleum), hydrotreated heavy

DNEL - General population - Long term - Inhalation

0,41 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Inhalation

1,9 mg/m³

Effects: Systemic

DNEL - General population - Long term - Inhalation

178,57 mg/m³

Effects: Local

DNEL - General population - Short term - Inhalation

640 mg/m³

Effects: Local

DNEL - Workers - Long term - Inhalation

837,5 mg/m³

Effects: Local

DNEL - Workers - Short term - Inhalation

1066,67 mg/m³

Effects: Local

DNEL - General population - Short term - Inhalation

1152 mg/m³

Effects: Systemic

DNEL - Workers - Short term - Inhalation

1286,4 mg/m³

Effects: Systemic

2-methoxy-1-methylethyl acetate

DNEL - General population - Long term - Inhalation

33 mg/m³

Effects: Local

DNEL - General population - Long term - Inhalation

33 mg/m³

Effects: Systemic

DNEL - General population - Long term - Oral

36 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Inhalation

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	275 mg/m³ <u>Effects</u> : Systemic
	DNEL - General population - Long term - Dermal 320 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Short term - Inhalation 550 mg/m³ <u>Effects</u> : Local
	DNEL - Workers - Long term - Dermal 796 mg/kg bw/day <u>Effects</u> : Systemic
n-butyl acetate	DNEL - General population - Long term - Oral 2 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Short term - Oral 2 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Dermal 3,4 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Short term - Dermal 6 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Dermal 7 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Short term - Dermal 11 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 12 mg/m³ <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 35,7 mg/m³ <u>Effects</u> : Local
	DNEL - Workers - Long term - Inhalation 48 mg/m³ <u>Effects</u> : Systemic
	DNEL - General population - Short term - Inhalation 300 mg/m³ <u>Effects</u> : Local
	DNEL - General population - Short term - Inhalation 300 mg/m³ <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Inhalation 300 mg/m³ <u>Effects</u> : Local

SECTION 8: Exposure controls/personal protection

DNEL - Workers - Short term - Inhalation

600 mg/m³

Effects: Local

DNEL - Workers - Short term - Inhalation

600 mg/m³

Effects: Systemic

Naphta (petroleum), hydrodesulfurized heavy

DNEL - General population - Long term - Inhalation

0,41 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Inhalation

1,9 mg/m³

Effects: Systemic

DNEL - General population - Long term - Inhalation

178,57 mg/m³

Effects: Local

DNEL - General population - Short term - Inhalation

640 mg/m³

Effects: Local

DNEL - Workers - Long term - Inhalation

837,5 mg/m³

Effects: Local

DNEL - Workers - Short term - Inhalation

1066,67 mg/m³

Effects: Local

DNEL - General population - Short term - Inhalation

570 mg/m³

Effects: Systemic

DNEL - Workers - Short term - Inhalation

570 mg/m³

Effects: Systemic

DNEL - General population - Long term - Dermal

12 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Oral

21 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Dermal

21 mg/kg bw/day

Effects: Systemic

strontium bis(2-ethylhexanoate)

DNEL - General population - Long term - Oral

0,16 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Dermal

0,167 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Dermal

0,333 mg/kg bw/day

Effects: Systemic

SECTION 8: Exposure controls/personal protection

DNEL - General population - Long term - Inhalation

0,172 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Inhalation

0,698 mg/m³

Effects: Systemic

PNECs

Product/ingredient name

2-methoxy-1-methylethyl acetate

Result

Fresh water

635 µg/l

Marine water

63,5 µg/l

Sewage Treatment Plant

100 mg/l

Fresh water sediment

3,29 mg/kg dwt

Marine water sediment

329 µg/kg dwt

Soil

290 µg/kg dwt

8.2 Exposure controls

Appropriate engineering controls

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

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. 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: Wear safety glasses with side protection in accordance with EN 166.

Skin protection

Hand protection

- : Wear suitable gloves to prevent prolonged or repeated skin contact. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves

- : Recommended: Nitrile gloves (thickness ≥ 0.3 mm, breakthrough time ≥ 8 hours, tested according to EN 374).

SECTION 8: Exposure controls/personal protection

- 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. Recommended: Wear suitable protective clothing that is EN-approved type 6 and Category III. When spraying, use a chemical-resistant suit with a hood that is EN-approved type 4, 5, 6 and Category III. Penetration tests must be performed in accordance with EN 369, in order to obtain knowledge about protection against the substances mentioned in point 3.
- 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. Recommended: Gas filtering device (DIN EN 14387), A2
Dust, which is unhealthy, is produced when treated surfaces are grinded. Use respiratory protection if necessary (P2, EN 143).
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Various
- Odour** : Hydrocarbon.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit** : Not available.
- Flash point** : Closed cup: 40°C (104°F)
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- pH** : Not available.
- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): >20,5 mm²/s
- Solubility** :
Not available.
- Solubility in water** : Not available.
- Miscible with water** : No.
- Partition coefficient n-octanol/water (log Pow)** : Not applicable.
- Vapour pressure** : Not available.

SECTION 9: Physical and chemical properties

Evaporation rate	: Not available.
Density	: 1,08 to 1,13 g/cm ³
Relative vapour density	: Not available.
Explosive properties	: Not available.
Oxidising properties	: Not available.
<u>Particle characteristics</u>	
Median particle size	: Not applicable.

9.2.1 Information with regard to physical hazard classes

Explosive properties	: Not available.
Oxidising properties	: Not available.

9.2.2 Other safety characteristics

Miscible with water	: No.
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SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: The product is stable.
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
10.5 Incompatible materials	: 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
Naphtha (petroleum), hydrotreated heavy	Rat - Oral - LD50 >5000 mg/kg Rat - Inhalation - LC50 Vapour 8500 mg/m ³ [4 hours] <u>Toxic effects</u> : Lung, Thorax, or Respiration - Other changes
Naphtha (petroleum), hydrotreated heavy	Rat - Inhalation - LC50 Vapour 8500 mg/m ³ [4 hours] <u>Toxic effects</u> : Lung, Thorax, or Respiration - Other changes
2-methoxy-1-methylethyl acetate	Rat - Oral - LD50 8532 mg/kg Rabbit - Dermal - LD50 >5 g/kg
n-butyl acetate	Rat - Oral - LD50 10768 mg/kg

SECTION 11: Toxicological information

Toxic effects: Behavioral - Somnolence (general depressed activity) Lung, Thorax, or Respiration - Other changes Liver - Other changes

Rabbit - Dermal - LD50

>17600 mg/kg

Rat - Inhalation - LC50 Gas.

390 ppm [4 hours]

Toxic effects: Behavioral - Changes in motor activity (specific assay) Lung, Thorax, or Respiration - Acute pulmonary edema
Blood - Hemorrhage

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
2-methoxy-1-methylethyl acetate n-butyl acetate	8532 10768	N/A N/A	N/A N/A	N/A N/A	N/A N/A

Skin corrosion/irritation

Product/ingredient name

n-butyl acetate

Result

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name

n-butyl acetate

Result

Rabbit - Eyes - Moderate irritant

Amount/concentration applied: 100 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

SECTION 11: Toxicological information

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Naphtha (petroleum), hydrotreated heavy	STOT SE 3, H336 (Narcotic effects)
2-methoxy-1-methylethyl acetate	STOT SE 3, H336 (Narcotic effects)
n-butyl acetate	STOT SE 3, H336 (Narcotic effects)
Naphtha (petroleum), hydrodesulfurized heavy	STOT SE 3, H336 (Narcotic effects)

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
Naphtha (petroleum), hydrodesulfurized heavy	STOT RE 1, H372 (inhalation)

Aspiration hazard

Product/ingredient name	Result
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, < 2% aromatics	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), hydrotreated heavy	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), hydrotreated heavy	ASPIRATION HAZARD - Category 1
Naphtha (petroleum), hydrodesulfurized heavy	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Not available.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following: irritation dryness cracking
Ingestion	: No specific data.

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

Short term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Long term exposure

Potential immediate effects	: Not available.
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SECTION 11: Toxicological information

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

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

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name

n-butyl acetate

Result

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 31 to 32 days; Size: 21,6 mm; Weight: 0,175 g
18 mg/l [96 hours]

Effect: Mortality

Acute - LC50 - Marine water

Crustaceans - Brine shrimp - *Artemia salina*

32 mg/l [48 hours]

Effect: Mortality

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Product/ingredient name

Naphta (petroleum), hydrodesulfurized heavy

Result

EU [Ready Biodegradability - Manometric Respirometry Test]
80% [28 days] - Readily

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Naphta (petroleum), hydrodesulfurized heavy	-	-	Readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Naphtha (petroleum), hydrotreated heavy	-	10 to 2500	High
Naphtha (petroleum), hydrotreated heavy	-	10 to 2500	High
2-methoxy-1-methylethyl acetate	1,2	-	Low
n-butyl acetate	2,3	-	Low
Naphtha (petroleum), hydrodesulfurized heavy	-	10 to 2500	High

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logK _{oc}	K _{oc}
2-methoxy-1-methylethyl acetate	0,36	2,31363
n-butyl acetate	1,5	33,2139
strontium bis(2-ethylhexanoate)	1,8	66,4852

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, < 2% aromatics	No	No	No	No	No	No	No
Naphtha (petroleum), hydrotreated heavy	No	No	No	No	No	No	No
Naphtha (petroleum), hydrotreated heavy	No	No	No	No	No	No	No
2-methoxy-1-methylethyl acetate	No	No	No	No	No	No	No
n-butyl acetate	No	No	No	No	No	No	No
Naphtha (petroleum), hydrodesulfurized heavy	No	No	No	No	No	No	No
strontium bis (2-ethylhexanoate)	No	No	Yes	Yes	No	No	Yes

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, < 2% aromatics	No	No	No	No	No	No	No
Naphtha (petroleum), hydrotreated heavy	No	No	No	No	No	No	No
Naphtha (petroleum), hydrotreated heavy	No	No	No	No	No	No	No
2-methoxy-1-methylethyl acetate	No	No	No	No	No	No	No
n-butyl acetate	No	No	No	No	No	No	No
Naphtha (petroleum), hydrodesulfurized heavy	No	No	No	Yes	No	No	No
strontium bis (2-ethylhexanoate)	No	No	No	Yes	No	No	No

Regulation (EC) No. 1272/2008 [CLP]

SECTION 12: Ecological information

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, < 2% aromatics	No	No	No	No	No	No	No
Naphtha (petroleum), hydrotreated heavy	No	No	No	No	No	No	No
Naphtha (petroleum), hydrotreated heavy	No	No	No	No	No	No	No
2-methoxy-1-methylethyl acetate	No	No	No	No	No	No	No
n-butyl acetate	No	No	No	No	No	No	No
Naphtha (petroleum), hydrodesulfurized heavy	No	No	No	No	No	No	No
strontium bis (2-ethylhexanoate)	No	No	No	Yes	No	No	No

Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP] : The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

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

13.1 Waste treatment methods

Product

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

Hazardous waste : Yes.

European waste catalogue (EWC)

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

Packaging

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

SECTION 13: Disposal considerations

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.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT
14.3 Transport hazard class (es)	3 	3 	3 
14.4 Packing group	III	III	III
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 : **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 user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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

Product/ingredient name	%	Designation [Usage]
FL METAL 5	≥90	3

Labelling : Not applicable.

Other EU regulations

Flügger Metal Pro Metal Enamel

SECTION 15: Regulatory information

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)
Not listed.

Prior Informed Consent (PIC) (649/2012/EU)
Not listed.

Persistent Organic Pollutants
Not listed.

Seveso Directive
This product is controlled under the Seveso Directive.

<u>Danger criteria</u>
Category
P5c

National regulations

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 assessment : Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.

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

Flügger Metal Pro Metal Enamel

SECTION 16: Other information

vPvB = Very Persistent and Very Bioaccumulative

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

Classification	Justification
Flam. Liq. 3, H226	On basis of test data

Full text of abbreviated H statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Notice to reader

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. 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.