

SAFETY DATA SHEET

FRS HARDENER

Section 1. Identification

GHS product identifier : FRS HARDENER SDS code : 21040000D

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 : Filler for interior use

Supplier's details

MAPAERO SAS

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Emergency telephone number (with hours of

operation)

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Section 2. Hazards identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3

ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

SKIN SENSITIZATION - Category 1

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

GHS label elements, including precautionary statements

Hazard pictograms





Signal word : Warning

: H226 - Flammable liquid and vapor. **Hazard statements**

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction. H319 - Causes serious eve irritation.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

Precautionary statements

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Section 2. Hazards identification

Prevention : P280 - Wear protective gloves. Wear eye or face protection.

> P210 - Keep away from heat, sparks and hot surfaces. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment.

P242 - Use non-sparking tools.

P243 - Take action to prevent static discharges.

P261 - Avoid breathing vapor.

P264 - Wash hands thoroughly after handling.

: P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Response

P362 + P364 - Take off contaminated clothing and wash it before reuse.

P302 + P352 - IF ON SKIN: Wash with plenty of water.

P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.

: P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. Storage

P403 + P235 - Keep cool.

: P501 - Dispose of contents and container in accordance with all local, regional, **Disposal**

national and international regulations.

Other hazards which do not : None known.

result in classification

Section 3. Composition/information on ingredients

Substance/mixture

| Ingredient name | % | CAS number |
|---------------------------------------|-----------|------------|
| Fexamethylene diisocyanate, oligomers | ≥50 - ≤75 | 28182-81-2 |
| 2-methoxy-1-methylethyl acetate | ≥10 - <20 | 108-65-6 |
| xylene | ≥10 - ≤25 | 1330-20-7 |
| ethylbenzene | ≤3 | 100-41-4 |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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Section 4. First aid measures

Skin contact

: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation: Harmful if inhaled. May cause respiratory irritation.

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

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

pain or irritation

watering redness

Inhalation: Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments

: No specific treatment.

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

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

Unsuitable extinguishing

media

: Do not use water jet.

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Section 5. Fire-fighting measures

Specific hazards arising from the chemical

: Flammable 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 thermal decomposition products

: Decomposition products may include the following materials: carbon dioxide

carbon dioxide carbon monoxide nitrogen oxides

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.

Section 6. Accidental release measures

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".

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).

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 non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing 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

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Section 7. Handling and storage

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.

including any incompatibilities

Conditions for safe storage, : 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 wellventilated 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits | |
|-----------------|---|--|
| x ýlene | Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018). [Xylene (o, m,p-isomers)] | |
| | TWA: 434 mg/m³ 8 hours. TWA: 100 BDS 8 hours. STEL: 651 mg/m³ 15 minutes. STEL: 150 BDS 15 minutes. | |
| ethylbenzene | Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018). TWA: 20 BDS 8 hours. | |

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.

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.

Individual protection measures

Hygiene measures

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

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Section 8. Exposure controls/personal protection

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.

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.

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.

Section 9. Physical and chemical properties

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

Appearance

Physical state : Liquid. Color Colorless. Odor Characteristic. **Odor threshold** : Not available.

Hq : Not available. [DIN EN 1262]

Melting point/freezing point Boiling point, initial boiling point, and boiling range

Not available. : Not available.

Flash point : Closed cup: 37°C (98.6°F) [Pensky-Martens]

Flammability : Not available. : Not available. Lower and upper explosion limit/flammability limit

Vapor pressure

| | Vapor Pressure at 20°C | | V | Vapor pressure a | | |
|---------------------------------|------------------------|--------|--------|------------------|-----|--------|
| Ingredient name | mm Hg | kPa | Method | mm Hg | kPa | Method |
| toluene | 23.17 | 3.1 | | | | |
| ethylbenzene | 9.3 | 1.2 | | | | |
| xylene | 6.7 | 0.89 | | | | |
| 2-methoxy-1-methylethyl acetate | 2.7 | 0.36 | | | | |
| hexamethylene-di-isocyanate | 0.01 | 0.0013 | | | | |
| 2,6-di-tert-butyl-p-cresol | 0.01 | 0.0013 | | | | |
| | | | | | | |

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Section 9. Physical and chemical properties

0.000018 0.0000024 Hexamethylene diisocyanate,

Relative vapor density : Not available.

: 1.07 g/cm³ [DIN EN ISO 2811-1] **Density**

Solubility(ies)

Media Result cold water Not soluble [OESO (TG 105)]

Partition coefficient: n-

: Not applicable.

octanol/water

Auto-ignition temperature

| Ingredient name | °C | °F | Method |
|-------------------------------|--------|-------|--------|
| methoxy-1-methylethyl acetate | 333 | 631.4 | |
| xylene | 432 | 809.6 | |
| ethylbenzene | 432.22 | 810 | |
| hexamethylene-di-isocyanate | 454 | 849.2 | |
| toluene | 480 | 896 | |

Decomposition temperature: Not available.

Viscosity

Kinematic (room temperature): 290 mm²/s (290 cSt) [DIN EN ISO 3219] Kinematic (40°C (104°F)): 101 mm²/s (101 cSt) [DIN EN ISO 3219]

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

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

Chemical stability : The product is stable.

Possibility of hazardous

reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid 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.

Incompatible materials : Reactive or incompatible with the following materials:

oxidizing materials

Hazardous decomposition

products

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

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should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

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Section 11. Toxicological information

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|---------------------------------|---------|-------------------------|----------|
| ⊮ examethylene | LC50 Inhalation Dusts and mists | Rat | 18500 mg/m³ | 1 hours |
| diisocyanate, oligomers | | | | |
| xylene | LC50 Inhalation Gas. | Rat | 6700 ppm | 4 hours |
| | LC50 Inhalation Gas. | Rat | 5000 ppm | 4 hours |
| | LC50 Inhalation Gas. | Rat | 6670 ppm | 4 hours |
| | LD50 Intraperitoneal | Mouse | 1548 mg/kg | - |
| | LD50 Intraperitoneal | Mouse | 1548 mg/kg | - |
| | LD50 Intraperitoneal | Rat | 2459 mg/kg | - |
| | LD50 Oral | Mouse | 2119 mg/kg | - |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| | LD50 Subcutaneous | Rat | 1700 mg/kg | - |
| ethylbenzene | LC50 Inhalation Gas. | Rabbit | 4000 ppm | 4 hours |
| | LC50 Inhalation Vapor | Mouse | 35500 mg/m ³ | 2 hours |
| | LC50 Inhalation Vapor | Rat | 55000 mg/m ³ | 2 hours |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Dermal | Rabbit | 17800 uL/kg | - |
| | LD50 Intraperitoneal | Mouse | 2624 uL/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|--------------------------|---------|-------|---------------|-------------|
| Hexamethylene diisocyanate, oligomers | Eyes - Moderate irritant | Rabbit | - | 100 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 500 mg | - |
| xylene | Eyes - Mild irritant | Rabbit | - | 87 mg | - |
| • | Eyes - Severe irritant | Rabbit | - | 24 hours 5 | - |
| | | | | mg | |
| | Skin - Mild irritant | Rat | - | 8 hours 60 UI | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 | - |
| | | | | mg | |
| ethylbenzene | Eyes - Severe irritant | Rabbit | - | 500 mg | - |
| , | Skin - Mild irritant | Rabbit | - | 24 hours 15 | - |
| | | | | mg | |

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

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| Name | Category | Route of exposure | Target organs |
|---------------------------------------|------------|-------------------|------------------------------|
| Hexamethylene diisocyanate, oligomers | Category 3 | - | Respiratory tract irritation |
| 2-methoxy-1-methylethyl acetate | Category 3 | - | Narcotic effects |
| xylene | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|--------------|------------|-------------------|----------------|
| ethylbenzene | Category 2 | - | hearing organs |

Aspiration hazard

| Name | Result |
|--------------|--------------------------------|
| xylene | ASPIRATION HAZARD - Category 1 |
| ethylbenzene | ASPIRATION HAZARD - Category 1 |

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation: Harmful if inhaled. May cause respiratory irritation.

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

Ingestion: No known significant effects or critical hazards.

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:

respiratory tract irritation

coughing

Skin contact: Adverse symptoms may include the following:

irritation redness

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.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed

to very low levels.

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Section 11. Toxicological information

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.

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|--|---|----------|
| x ylene | Acute EC50 90 mg/l Fresh water | Crustaceans - Cypris | 48 hours |
| | | subglobosa | |
| | Acute LC50 8.5 ppm Marine water | Crustaceans - Palaemonetes | 48 hours |
| | | pugio - Adult | |
| | Acute LC50 8500 μg/l Marine water | Crustaceans - Palaemonetes | 48 hours |
| | | pugio | |
| | Acute LC50 16940 μg/l Fresh water | Fish - Carassius auratus | 96 hours |
| | Acute LC50 15700 μg/l Fresh water | Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, | 96 hours |
| | Acuto I C50 20870 ug/l Fresh water | Weanling) | 96 hours |
| | Acute LC50 20870 µg/l Fresh water | Fish - Lepomis macrochirus Fish - Lepomis macrochirus | 96 hours |
| | Acute LC50 19000 μg/l Fresh water Acute LC50 13400 μg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| ethylbenzene | Acute EC50 13400 µg/l Fresh water | Algae - Pseudokirchneriella | 72 hours |
| etriyiberizerie | | subcapitata | |
| | Acute EC50 5400 μg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 3600 μg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 hours |
| | Acute EC50 4900 µg/l Marine water | Algae - Skeletonema costatum | 72 hours |
| | Acute EC50 7700 µg/l Marine water | Algae - Skeletonema costatum | 96 hours |
| | Acute EC50 6.53 mg/l Marine water | Crustaceans - Artemia sp Nauplii | 48 hours |
| | Acute EC50 13.3 mg/l Marine water | Crustaceans - Artemia sp Nauplii | 48 hours |
| | Acute EC50 2.97 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute EC50 2.93 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 8.78 mg/l Marine water | Crustaceans - Artemia sp Nauplii | 48 hours |
| | Acute LC50 13.3 mg/l Marine water | Crustaceans - Artemia sp Nauplii | 48 hours |
| | Acute LC50 40000 μg/l Marine water | Crustaceans - Cancer magister - Zoea | 48 hours |
| | Acute LC50 18.4 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 13.9 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 75000 μg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 75000 µg/l Marine water | Fish - Menidia menidia | 96 hours |
| | Acute LC50 4.3 ul/L Marine water | Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
| | Acute LC50 4200 µg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Acute LC50 4200 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 9100 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |

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Section 12. Ecological information

Persistence/degradability

Not available.

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|---------------------------------------|-------------|------------------|------------|
| Fexamethylene diisocyanate, oligomers | 5.54 | 367.7 | low |
| 2-methoxy-1-methylethyl acetate | 1.2 | - | low |
| xylene ethylbenzene | 3.12 3.6 | 8.1 to 25.9 - | low low |

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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

Section 14. Transport information

| | UN | IMDG | IATA |
|----------------------------|--------|--------|--------|
| UN number | UN1263 | UN1263 | UN1263 |
| UN proper shipping name | PAINT | PAINT | PAINT |
| Transport hazard class(es) | 3 | 3 | 3 |
| Packing group | III | III | III |
| Environmental hazards | No. | No. | No. |

Additional information

UN

: <u>Viscous liquid exception</u> This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.1.

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Section 14. Transport information

: 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.

IMDG Code Segregation group Not applicable

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.

Transport in bulk according: Not available.

to IMO instruments

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

: Decree 23/M-IND/PER/4/2013 - SDS Format and Content (GHS)

Law No. 74/2001 - Banned

None of the components are listed.

Law No. 74/2001 - Restricted

None of the components are listed.

Law No. 74/2001 -: Not determined

Chemicals that may be used

Ministry of Health - Law No. 472/Menkes/Per/V/1996

Carcinogen

None of the components are listed.

None of the components are listed.

Irritation

| Ingredient name | Status |
|-----------------------------|--------|
| rexamethylene-di-isocyanate | Listed |

Mutagen

None of the components are listed.

Oxidizer

None of the components are listed.

Poison

| Ingredient name | Status |
|-----------------------------|--------|
| rexamethylene-di-isocyanate | Listed |

Teratogen

None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

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Section 15. Regulatory information

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

History

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Key to abbreviations

: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available SGG = Segregation Group UN = United Nations

Procedure used to derive the classification

| Classification | Justification |
|---|-----------------------|
| AMMABLE LIQUIDS - Category 3 | On basis of test data |
| ACUTE TOXICITY (inhalation) - Category 4 | Calculation method |
| SKIN CORROSION/IRRITATION - Category 2 | Calculation method |
| SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A | Calculation method |
| SKIN SENSITIZATION - Category 1 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract | Calculation method |
| irritation) - Category 3 | |

✓ Indicates information that has changed from previously issued version.

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