

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 453/2010 - United Kingdom (UK)

Print Date: 01.05.2020

Date of Issue / Date of Revision: 21.01.2015

Version Number: 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Product description : Paint. Hardener.

Product type : Liquid.

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

| Identified uses | |
|---|---|
| Industrial uses: Uses of substances as such or in preparations* at industrial sites Professional uses: Public domain (administration, education, entertainment, services, craftsmen) | |
| Uses advised against | Reason |
| Consumer use | Product is not intended for consumer use. |

1.3 Details of the supplier of the safety data sheet

Cactus Industrial Limited
Unit 11, Block 6 Trading Estate, Third Road,
Blantyre Industrial Estate
Blantyre
Scotland
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1.4 Emergency telephone number: +44 (0) 1698 591 635**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]

Acute Tox. 4, H332
Skin Sens. 1, H317
STOT SE 3, H335

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Xn; R20
Xi; R37
R43

Human health hazards : Harmful by inhalation. Irritating to respiratory system. May cause sensitisation by skin contact.

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SECTION 2: Hazards identification

See Section 1.6 for the full text of the R phrases or H statements declared above.
See Section 1.1 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word :

Warning

Hazard statements :

Harmful if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.

Precautionary statements

Prevention :

Wear protective gloves and eye protection: butyl rubber gloves-Safety glasses with side shields. Use only outdoors or in a well-ventilated area.

Response :

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Storage :

Store locked up.

Disposal :

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

Supplemental label elements :

Contains isocyanates. May produce an allergic reaction.

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

Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings :

Not applicable.

Tactile warning of danger :

Yes, applicable.

2.3 Other hazards

Other hazards which do not result in classification :

None known.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

| Product/ingredient name | Identifiers | % | Classification | | Type |
|--|---|------|-----------------------------------|--|--------|
| | | | 67/548/EEC | Regulation (EC) No. 1272/2008 [CLP] | |
| hexamethylene-1, 6-diiisocyanate homopolymer | REACH #: 01-2119485796-17 EC: 931-274-8 CAS: 28182-81-2 | >=90 | R43 | Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335 | [1][2] |
| hexamethylene-diisocyanate | REACH #: 01-2119457571-37 EC: 212-485-8 CAS: 822-06-0 | <0.5 | T; R23 Xi; R36/37/38 R42/43 | Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 | [1][2] |

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SECTION 3: Composition/information on ingredients

| | | | |
|--|---------------------|---|---|
| | Index: 615-011-00-1 | | Skin Sens. 1, H317 STOT SE 3, H335 |
| | | See Section 16 for the full text of the R- phrases declared above. | See Section 16 for the full text of the H statements declared above. |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs 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
- Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. 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.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. See Sections 2 and 3 for details.

Exposure to component solvent vapour 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.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

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. 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.

Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

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SECTION 4: First aid measures

Repeated or prolonged contact with irritants may cause dermatitis.

Contains hexamethylene-1,6-diiisocyanate homopolymer, hexamethylene-di-isocyanate. May produce an allergic reaction.

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.

See toxicological information (Section 11)

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂, powders, water spray or mist.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

Additional information : No unusual hazard if involved in a fire.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

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

: Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and materials for containment and cleaning up

: 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). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for

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SECTION 6: Accidental release measures

several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13).

- 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

Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Examination of lung function should be carried out on a regular basis on persons spraying this mixture.

- 7.1 Precautions for safe handling** : Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one.
Comply with the health and safety at work laws.
Do not allow to enter drains or watercourses.

- 7.2 Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations.
Notes on joint storage
Keep away from: oxidising agents, strong alkalis, strong acids.
Additional information on storage conditions
Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.
Keep container tightly closed.
Keep away from sources of ignition. No smoking. Prevent unauthorised access.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

- 7.3 Specific end use(s)**
- Recommendations** : Not available.
Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|---|--|
| hexamethylene-1,6-diiisocyanate homopolymer | EH40/2005WELs (United Kingdom (UK), 8/2007). Skin sensitiser. STEL: 0.07 mg/m ³ , (as NCO) 15 minutes. TWA: 0.02 mg/m ³ , (as NCO) 8 hours. |
| hexamethylene-di-isocyanate | EH40/2005WELs (United Kingdom (UK), 12/2011). Skin sensitiser. STEL: 0.07 mg/m ³ , (as NCO) 15 minutes. TWA: 0.02 mg/m ³ , (as NCO) 8 hours. |

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SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures

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 |
|---|------|-----------------------|-----------------------|------------|---------|
| hexamethylene-1,6-diiisocyanate homopolymer | DNEL | Short term Inhalation | 1 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 0.5 mg/m ³ | Workers | Local |
| hexamethylene-di-isocyanate | DNEL | Short term Inhalation | 1 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 0.5 mg/m ³ | Workers | Local |

PNECs

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---|------------------------|------------------|---------------|
| hexamethylene-1,6-diiisocyanate homopolymer | Fresh water | 0.127 mg/l | - |
| | Marine | 0.0127 mg/l | - |
| | Fresh water sediment | 266700 mg/kg dwt | - |
| | Marine water sediment | 26670 mg/kg dwt | - |
| | Soil | 53182 mg/kg dwt | - |
| | Sewage Treatment Plant | 38.28 mg/l | - |
| hexamethylene-di-isocyanate | Fresh water | 0.127 mg/l | - |
| | Marine | 0.0127 mg/l | - |
| | Sediment | 266700 mg/kg dwt | - |
| | Soil | 53182 mg/kg dwt | - |
| | Sewage Treatment Plant | 38.28 mg/l | - |
| | | | |

8.2 Exposure controls

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used.

Examination of lung function should be carried out on a regular basis on persons spraying this mixture.

Appropriate engineering controls

: Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn. (See Personal protection.)

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety glasses with side shields. (EN 166)

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

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

Always ensure that gloves are free from defects and that they are stored and used correctly.

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

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: > 8 hours (breakthrough time): Butyl rubber gloves.

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

EN 374-3 : 2003

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 : Wear overalls or long sleeved shirt. (EN 467)

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 : By spraying: air-fed respirator.
By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask.
Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flattening should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Recommended: organic vapour (Type A) and particulate filter (EN 141)

Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.
Colour : Clear. Colourless.
Odour : Mild.
pH : Not available.
Melting point/freezing point : Not available.

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SECTION 9: Physical and chemical properties

| | |
|--|---|
| Initial boiling point and boiling range | : Not available. |
| Flash point | : Closed cup: 158°C |
| Evaporation rate | : Not available. |
| Flammability (solid, gas) | : Not available. |
| Burning time | : Not applicable. |
| Burning rate | : Not applicable. |
| Upper/lower flammability or explosive limits | : Not available. |
| Vapour pressure | : <0.000003 kPa [room temperature] |
| Vapour density | : Not available. |
| Relative density | : 1.16 to 1.17 |
| Solubility(ies) | : Insoluble in the following materials: cold water and hot water. |
| Solubility in water | : Not available. |
| Partition coefficient: n-octanol/water | : Not available. |
| Auto-ignition temperature | : 445°C |
| Decomposition temperature | : Not available. |
| Viscosity | : Dynamic (room temperature): 1200 mPa·s |
| Explosive properties | : Not available. |
| Oxidising properties | : Not available. |

9.2 Other information

No additional information.

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 | : Stable under recommended storage and handling conditions (see Section 7). |
| 10.3 Possibility of hazardous reactions | : The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure build-up could result in distortion, expansion and, in extreme cases, bursting of the container |
| 10.4 Conditions to avoid | : In a fire, hazardous decomposition products may be produced. |
| 10.5 Incompatible materials | : Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols. |
| 10.6 Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO ₂ and smoke can be generated. |

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SECTION 1 1: Toxicological information

1 1.1 Information on toxicological effects

There are no data available on the mixture itself. See Sections 2 and 3 for details.

Exposure to component solvent vapour 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. If splashed in the eyes, the liquid may cause irritation and reversible damage.

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. 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.

Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

Contains hexamethylene-1,6-diiisocyanate homopolymer, hexamethylene-di-isocyanate. May produce an allergic reaction.

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---------------------------------|--------------|-----------------------|----------|
| hexamethylene-1,6-diiisocyanate homopolymer | LC50 Inhalation Dusts and mists | Rat - Female | 390 mg/m ³ | 4 hours |
| | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Dermal | Rat | >2000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| hexamethylene-di-isocyanate | LC50 Inhalation Dusts and mists | Rat | 462 mg/m ³ | 4 hours |
| | LC50 Inhalation Vapour | Rat | 124 mg/m ³ | 4 hours |
| | LCLo Inhalation Vapour | Rat | 60 mg/m ³ | 4 hours |
| | LD50 Dermal | Rabbit | >7000 mg/kg | - |

Conclusion/Summary : Harmful if inhaled.

Acute toxicity estimates

Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|------------------------------------|---------|-------|----------|-------------|
| hexamethylene-1,6-diiisocyanate homopolymer | Skin - Oedema | Rabbit | 1 | 4 hours | - |
| | Eyes - Cornea opacity | Rabbit | 1 | - | - |
| hexamethylene-di-isocyanate | Skin - Erythema/Eschar | Rabbit | 3 | - | - |
| | Eyes - Redness of the conjunctivae | Rabbit | 3 | - | - |

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Eyes : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

Sensitisation

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SECTION 11: Toxicological information

| Product/ingredient name | Route of exposure | Species | Result |
|--|-------------------|---------------------|--------------------------------|
| hexamethylene-1, 6-diiisocyanate homopolymer | skin | Guinea pig | Sensitising |
| | Respiratory skin | Guinea pig Mouse | Not sensitizing Sensitising |
| hexamethylene-di-isocyanate | skin | Guinea pig | Sensitising |
| | Respiratory | Guinea pig | Sensitising |

Conclusion/Summary

Skin : May cause an allergic skin reaction.

Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

| Product/ingredient name | Test | Experiment | Result |
|--|----------|---|----------|
| hexamethylene-1, 6-diiisocyanate homopolymer | OECD 471 | Subject: Bacteria | Negative |
| | OECD 476 | Subject: Mammalian-Animal | Negative |
| hexamethylene-di-isocyanate | OECD 471 | Experiment: In vitro Subject: Bacteria | Negative |
| | OECD 476 | Experiment: In vitro Subject: Mammalian-Animal | Negative |
| | OECD 474 | Experiment: In vivo Subject: Mammalian-Animal | Negative |

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

Carcinogenicity

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

Reproductive toxicity

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

Teratogenicity

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

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|------------|-------------------|------------------------------|
| hexamethylene-1,6-diiisocyanate homopolymer | Category 3 | Not applicable. | Respiratory tract irritation |
| hexamethylene-di-isocyanate | Category 3 | Not applicable. | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

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.

| Product/ingredient name | Result | Species | Exposure |
|--|---|--|----------------------|
| hexamethylene-1, 6-diiisocyanate homopolymer | Acute EC50 >10000 mg/l | Bacteria | 3 hours |
| | Acute EC50 >100 mg/l Acute IC50 >1000 mg/l | Daphnia spec. Algae - Scenedesmus subspicatus | 48 hours 72 hours |
| | Acute LC50 >100 mg/l Acute EC50 >77.4 mg/l | Fish Algae | 96 hours 72 hours |
| hexamethylene-di-isocyanate | Acute EC50 842 mg/l | Bacteria | 3 hours |

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

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|---|-----------------------------|------|----------|
| hexamethylene-1, 6-diiisocyanate homopolymer hexamethylene-di-isocyanate | OECD 301C | 2 % - Not readily - 28 days | - | - |
| | OECD 301F | 42 % - 10 days | - | - |
| | EU 301F Ready Biodegradability - Manometric Respirometry Test | 42 % - 28 days | - | - |

Conclusion/Summary : This product has not been tested for biodegradation. Based on available data, the classification criteria are not met.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|--|-----------------------|------------------|------------------|
| hexamethylene-1, 6-diiisocyanate homopolymer | Fresh water 0.32 days | 50%; 0.49 day(s) | Not readily |
| hexamethylene-di-isocyanate | - | - | Not readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|-----|-----------|
| hexamethylene-1, 6-diiisocyanate homopolymer | 8.38 | 706 | high |
| hexamethylene-di-isocyanate | 1.08 | - | low |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Non-volatile.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

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SECTION 12: Ecological information

- vPvB : Not applicable.
 12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
- Hazardous waste** : Yes.
- Disposal considerations** : Do not allow to enter drains or watercourses. Residues in empty containers should be neutralised with a decontaminant (see section 6). 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 |
|------------|---|
| 08 01 11* | waste paint and varnish containing organic solvents or other dangerous 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.
- 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. Not emptied containers are hazardous waste.
- 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. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | IMDG | IATA |
|---------------------------------|----------------|----------------|----------------|
| 14.1 UN number | Not regulated. | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name | - | - | - |
| 14.3 Transport hazard class(es) | - | - | - |
| 14.4 Packing group | - | - | - |

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 453/2010 - United Kingdom (UK)

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SECTION 14: Transport information

| | | | |
|----------------------------|-----|-----|-----|
| 14.5 Environmental hazards | No. | No. | No. |
| Additional information | - | - | - |

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.

SECTION 15: Regulatory information

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

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.

CN code : 3209 90 00

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 : Not applicable.

Other EU regulations

VOC for Ready-for-Use Mixture : 2004/42/EC - IIA/j; 550g/l (2007) 500g/l (2010). <= 160g/l VOC.

Europe inventory

: All components are listed or exempted.

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

▣ Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 vPvB = Very Persistent and Very Bioaccumulative

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

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SECTION 16: Other information

| Classification | Justification |
|---|---|
| Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335 | On basis of test data Expert judgment Expert judgment |

Full text of abbreviated H statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.

Full text of classifications [CLP/GHS] : Acute Tox. 1, H330 ACUTE TOXICITY: INHALATION - Category 1
Acute Tox. 4, H332 ACUTE TOXICITY: INHALATION - Category 4
Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Resp. Sens. 1, H334 RESPIRATORY SENSITIZATION - Category 1
Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1
STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3

Full text of abbreviated R phrases : R23- Toxic by inhalation.
R20- Harmful by inhalation.
R37- Irritating to respiratory system.
R36/37/38- Irritating to eyes, respiratory system and skin.
R43- May cause sensitisation by skin contact.
R42/43- May cause sensitisation by inhalation and skin contact.

Full text of classifications [DSD/DPD] : T - Toxic
Xn - Harmful
Xi - Irritant

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Version : 1

Notice to reader

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