

HARDENER FOR CLEAR COAT HS 1:2 EXTRA SLOW

Printing: 23/12/2022

Date of compilation: 26/06/2011

Revised: 26/10/2022

Version: 4 (Replaced 3)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier:** HARDENER FOR CLEAR COAT HS 1:2 EXTRA SLOW**Other means of identification:****UFI:** 9KMV-P047-P00K-GKY8**1.2 Relevant identified uses of the substance or mixture and uses advised against:**

Relevant uses: Car repair; hardener for coatings. For professional users only.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Troton Sp. z o.o.

Ząbrowo 14A

78-120 Gościno - Zachodniopomorskie - Polska

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www.troton.pl / www.troton.eu

1.4 Emergency telephone number: (8am-4pm)+48 094 35 123 94; 112**SECTION 2: HAZARDS IDENTIFICATION ******2.1 Classification of the substance or mixture:****CLP Regulation (EC) No 1272/2008:**

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Acute Tox. 4: Acute inhalation toxicity, Category 4, H332

Skin Sens. 1: Sensitisation, skin, Category 1, H317

STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Label elements:**CLP Regulation (EC) No 1272/2008:****Warning****Hazard statements:**

Acute Tox. 4: H332 - Harmful if inhaled.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

STOT SE 3: H335 - May cause respiratory irritation.

Precautionary statements:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/respiratory protection/eye protection/protective footwear.

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

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312: Call a POISON CENTER/doctor if you feel unwell.

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

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

Supplementary information:

EUH204: Contains isocyanates. May produce an allergic reaction.

Substances that contribute to the classification

Hexamethylene diisocyanate, oligomers; 2-butoxyethyl acetate

Additional Labelling:

As from 24 August 2023 adequate training is required before industrial or professional use.

2.3 Other hazards:*** Changes with regards to the previous version*

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SECTION 2: HAZARDS IDENTIFICATION ** (continued)

Product fails to meet PBT/vPvB criteria
Endocrine-disrupting properties: The product fails to meet the criteria.

** Changes with regards to the previous version

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:




Non-applicable

3.2 Mixture:

Chemical description: Mixture composed of chemical products

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

| Identification | Chemical name/Classification | | Concentration |
|---|--|---|----------------------|
| CAS: 28182-81-2 EC: 931-274-8 Index: Non-applicable REACH: 01-2119485796-17-XXXX | Hexamethylene diisocyanate, oligomers⁽¹⁾ | Self-classified | 50 - <75 % |
| | Regulation 1272/2008 | Acute Tox. 4: H332; Skin Sens. 1: H317; STOT SE 3: H335 - Warning  | |
| CAS: 112-07-2 EC: 203-933-3 Index: 607-038-00-2 REACH: 01-2119475112-47-XXXX | 2-butoxyethyl acetate⁽¹⁾ | ATP CLP00 | 25 - <50 % |
| | Regulation 1272/2008 | Acute Tox. 4: H312+H332 - Warning  | |
| CAS: 123-86-4 EC: 204-658-1 Index: 607-025-00-1 REACH: 01-2119485493-29-XXXX | N-butyl acetate⁽¹⁾ | ATP CLP00 | 5 - <10 % |
| | Regulation 1272/2008 | Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning  | |

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

By ingestion/aspiration:

In case of consumption, seek immediate medical assistance showing the SDS for the product.

4.2 Most important symptoms and effects, both acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

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SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media:****Suitable extinguishing media:**

Product is non-flammable under normal conditions of storage, manipulation and use, but the product contains flammable substances. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures:****For non-emergency personnel:**

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling:**

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Consult section 10 for conditions and materials that should be avoided.

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SECTION 7: HANDLING AND STORAGE (continued)

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 15 °C

Maximum Temp.: 25 °C

Maximum time: 12 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

| Identification | Occupational exposure limits | | |
|--|------------------------------|---------|-----------------------|
| | IOELV (8h) | 20 ppm | 133 mg/m ³ |
| 2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3 | IOELV (STEL) | 50 ppm | 333 mg/m ³ |
| N-butyl acetate CAS: 123-86-4 EC: 204-658-1 | IOELV (8h) | 50 ppm | 241 mg/m ³ |
| | IOELV (STEL) | 150 ppm | 723 mg/m ³ |

DNEL (Workers):

| Identification | | Short exposure | | Long exposure | |
|---|------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | Systemic | Local | Systemic | Local |
| Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Inhalation | Non-applicable | 1 mg/m ³ | Non-applicable | 0,5 mg/m ³ |
| 2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | 120 mg/kg | Non-applicable | 169 mg/kg | Non-applicable |
| | Inhalation | Non-applicable | 333 mg/m ³ | 133 mg/m ³ | Non-applicable |
| N-butyl acetate CAS: 123-86-4 EC: 204-658-1 | Oral | Non-applicable | Non-applicable | Non-applicable | Non-applicable |
| | Dermal | 11 mg/kg | Non-applicable | 11 mg/kg | Non-applicable |
| | Inhalation | 600 mg/m ³ | 600 mg/m ³ | 300 mg/m ³ | 300 mg/m ³ |

DNEL (General population):

| Identification | | Short exposure | | Long exposure | |
|---|------------|-----------------------|-----------------------|------------------------|------------------------|
| | | Systemic | Local | Systemic | Local |
| 2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3 | Oral | 36 mg/kg | Non-applicable | 8,6 mg/kg | Non-applicable |
| | Dermal | 72 mg/kg | Non-applicable | 102 mg/kg | Non-applicable |
| | Inhalation | Non-applicable | 200 mg/m ³ | 80 mg/m ³ | Non-applicable |
| N-butyl acetate CAS: 123-86-4 EC: 204-658-1 | Oral | 2 mg/kg | Non-applicable | 2 mg/kg | Non-applicable |
| | Dermal | 6 mg/kg | Non-applicable | 6 mg/kg | Non-applicable |
| | Inhalation | 300 mg/m ³ | 300 mg/m ³ | 35,7 mg/m ³ | 35,7 mg/m ³ |

PNEC:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)



| Identification | | | | |
|---|--------------|----------------|-------------------------|--------------|
| Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8 | STP | 88 mg/L | Fresh water | 0,127 mg/L |
| | Soil | 53183 mg/kg | Marine water | 0,013 mg/L |
| | Intermittent | 1,27 mg/L | Sediment (Fresh water) | 266701 mg/kg |
| | Oral | Non-applicable | Sediment (Marine water) | 26670 mg/kg |
| 2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3 | STP | 90 mg/L | Fresh water | 0,304 mg/L |
| | Soil | 0,415 mg/kg | Marine water | 0,03 mg/L |
| | Intermittent | 0,56 mg/L | Sediment (Fresh water) | 2,03 mg/kg |
| | Oral | 0,06 g/kg | Sediment (Marine water) | 0,203 mg/kg |
| N-butyl acetate CAS: 123-86-4 EC: 204-658-1 | STP | 35,6 mg/L | Fresh water | 0,18 mg/L |
| | Soil | 0,09 mg/kg | Marine water | 0,018 mg/L |
| | Intermittent | 0,36 mg/L | Sediment (Fresh water) | 0,981 mg/kg |
| | Oral | Non-applicable | Sediment (Marine water) | 0,098 mg/kg |

8.2 Exposure controls:



A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection



| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|---|--|---|---------------------|--|
|  Mandatory respiratory tract protection | Filter mask for gases and vapours (Filter type: A) |  | EN 405:2002+A1:2010 | Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment. |

C.- Specific protection for the hands



| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|--|--|---|---|--|
|  Mandatory hand protection | NON-disposable chemical protective gloves (Material: Nitrile, Breakthrough time: > 480 min, Thickness: 0.4 mm) |  | EN ISO 374-1:2016+A1:2018 EN 16523-1:2015+A1:2018 EN ISO 21420:2020 | The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin. |

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|--|---|---|---------------------------------|---|
|  Mandatory face protection | Panoramic glasses against splash/projections. |  | EN 166:2002 EN ISO 4007:2018 | Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. |

E.- Body protection

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|---|---|---|---|---|
|  Mandatory complete body protection | Disposable clothing for protection against chemical risks, with antistatic and fireproof properties |  | EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994 | For professional use only. Clean periodically according to the manufacturer's instructions. |

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

| Pictogram | PPE | Labelling | CEN Standard | Remarks |
|--|---|---|---|---|
|  Mandatory foot protection | Safety footwear for protection against chemical risk, with antistatic and heat resistant properties |  | EN ISO 13287:2020 EN ISO 20345:2011 EN 13832-1:2019 | Replace boots at any sign of deterioration. |

F.- Additional emergency measures

| Emergency measure | Standards | Emergency measure | Standards |
|---|---|--|--|
|  Emergency shower | ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011 |  Eyewash stations | DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011 |

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C: Liquid
 Appearance: Not available
 Colour: Not available
 Odour: Not available
 Odour threshold: Non-applicable *

Volatility:

Boiling point at atmospheric pressure: 179 °C
 Vapour pressure at 20 °C: 288 Pa
 Vapour pressure at 50 °C: 1565,39 Pa (1,57 kPa)
 Evaporation rate at 20 °C: Non-applicable *

Product description:

Density at 20 °C: 1027 kg/m³
 Relative density at 20 °C: 1,027
 Dynamic viscosity at 20 °C: 3000 cP
 Kinematic viscosity at 20 °C: 2921,23 mm²/s
 Kinematic viscosity at 40 °C: Non-applicable *
 Concentration: Non-applicable *
 pH: Non-applicable *
 Vapour density at 20 °C: Non-applicable *
 Partition coefficient n-octanol/water 20 °C: Non-applicable *
 Solubility in water at 20 °C: Non-applicable *
 Solubility properties: Non-applicable *
 Decomposition temperature: Non-applicable *
 Melting point/freezing point: Non-applicable *

Flammability:

Flash Point: 64 °C

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Flammability (solid, gas): Non-applicable *
 Autoignition temperature: 180 °C
 Lower flammability limit: Non-applicable *
 Upper flammability limit: Non-applicable *

Particle characteristics:

Median equivalent diameter: Non-applicable

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties: Non-applicable *
 Oxidising properties: Non-applicable *
 Corrosive to metals: Non-applicable *
 Heat of combustion: Non-applicable *
 Aerosols-total percentage (by mass) of flammable components: Non-applicable *

Other safety characteristics:

Surface tension at 20 °C: Non-applicable *
 Refraction index: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

| Shock and friction | Contact with air | Increase in temperature | Sunlight | Humidity |
|--------------------|------------------|-------------------------|------------|----------------|
| Not applicable | Not applicable | Precaution | Precaution | Not applicable |

10.5 Incompatible materials:

| Acids | Water | Oxidising materials | Combustible materials | Others |
|--------------------|----------------|---------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Avoid direct impact | Not applicable | Avoid alkalis or strong bases |

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

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

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
IARC: Non-applicable
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

| Identification | Acute toxicity | | Genus |
|---|-----------------|-----------------|--------|
| | | | |
| N-butyl acetate CAS: 123-86-4 EC: 204-658-1 | LD50 oral | 12789 mg/kg | Rat |
| | LD50 dermal | 14112 mg/kg | Rabbit |
| | LC50 inhalation | 23,4 mg/L (4 h) | Rat |
| Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8 | LD50 oral | 5100 mg/kg | Rat |
| | LD50 dermal | >2000 mg/kg | |
| | LC50 inhalation | 11 mg/L (ATEI) | |
| 2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3 | LD50 oral | 2100 mg/kg | Rat |
| | LD50 dermal | 1480 mg/kg | Rabbit |
| | LC50 inhalation | 11 mg/L (4 h) | Rat |

Acute Toxicity Estimate (ATE mix):

| ATE mix | | Ingredient(s) of unknown toxicity |
|---------|----------------------------------|-----------------------------------|
| Oral | >2000 mg/kg (Calculation method) | Non-applicable |

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

| | | |
|------------|---------------------------------------|-----|
| Dermal | 3652,52 mg/kg (Calculation method) | 0 % |
| Inhalation | 11,84 mg/L (4 h) (Calculation method) | 0 % |

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product fails to meet the criteria.

Other information

Non-applicable

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Acute toxicity:

| Identification | Concentration | | Species | Genus |
|---|---------------|------------------|-------------------------|------------|
| Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8 | LC50 | Non-applicable | | |
| | EC50 | Non-applicable | | |
| | EC50 | 1000 mg/L (72 h) | Scenedesmus subspicatus | Algae |
| 2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3 | LC50 | 80 mg/L (48 h) | Leuciscus idus | Fish |
| | EC50 | 37 mg/L (48 h) | Daphnia magna | Crustacean |
| | EC50 | 500 mg/L (72 h) | Scenedesmus subspicatus | Algae |
| N-butyl acetate CAS: 123-86-4 EC: 204-658-1 | LC50 | Non-applicable | | |
| | EC50 | Non-applicable | | |
| | EC50 | 675 mg/L (72 h) | Scenedesmus subspicatus | Algae |

Chronic toxicity:

| Identification | Concentration | | Species | Genus |
|--|---------------|----------------|---------------|------------|
| N-butyl acetate CAS: 123-86-4 EC: 204-658-1 | NOEC | Non-applicable | | |
| | NOEC | 23,2 mg/L | Daphnia magna | Crustacean |

12.2 Persistence and degradability:

Substance-specific information:

| Identification | Degradability | | Biodegradability | |
|---|---------------|----------------|------------------|----------------|
| | | | | |
| 2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3 | BOD5 | Non-applicable | Concentration | 30 mg/L |
| | COD | Non-applicable | Period | 28 days |
| | BOD5/COD | Non-applicable | % Biodegradable | 77,3 % |
| N-butyl acetate CAS: 123-86-4 EC: 204-658-1 | BOD5 | Non-applicable | Concentration | Non-applicable |
| | COD | Non-applicable | Period | 5 days |
| | BOD5/COD | Non-applicable | % Biodegradable | 84 % |

12.3 Bioaccumulative potential:

Substance-specific information:

| Identification | Bioaccumulation potential | |
|---|---------------------------|------|
| | | |
| 2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3 | BCF | 3 |
| | Pow Log | 1.51 |
| | Potential | Low |
| N-butyl acetate CAS: 123-86-4 EC: 204-658-1 | BCF | 4 |
| | Pow Log | 1.78 |
| | Potential | Low |

12.4 Mobility in soil:

| Identification | Absorption/desorption | | Volatility | |
|---|-----------------------|----------------|------------|---------------------------------|
| | | | | |
| 2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3 | Koc | Non-applicable | Henry | 5,532E-1 Pa·m ³ /mol |
| | Conclusion | Non-applicable | Dry soil | No |
| | Surface tension | Non-applicable | Moist soil | Yes |

- CONTINUED ON NEXT PAGE -

Safety data sheet

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SECTION 12: ECOLOGICAL INFORMATION (continued)

| Identification | Absorption/desorption | | Volatility | |
|-----------------|-----------------------|----------------------|------------|----------------|
| N-butyl acetate | Koc | Non-applicable | Henry | Non-applicable |
| CAS: 123-86-4 | Conclusion | Non-applicable | Dry soil | Non-applicable |
| EC: 204-658-1 | Surface tension | 2,478E-2 N/m (25 °C) | Moist soil | Non-applicable |

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product fails to meet the criteria.

12.7 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

| Code | Description | Waste class (Regulation (EU) No 1357/2014) |
|------------------------|---|--|
| 08 01 11* 15 01 10* | waste paint and varnish containing organic solvents or other hazardous substances packaging containing residues of or contaminated by hazardous substances | Dangerous |

Type of waste (Regulation (EU) No 1357/2014):

HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP13 Sensitising

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:



- 14.1 UN number or ID number:** UN1263
- 14.2 UN proper shipping name:** PAINT
- 14.3 Transport hazard class(es):** 3
- Labels:** 3
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
 - Special regulations: 163, 367, 650
 - Tunnel restriction code: D/E
 - Physico-Chemical properties: see section 9
 - Limited quantities: 5 L
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:

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SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number or ID number:** UN1263
- 14.2 UN proper shipping name:** PAINT
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group:** III
- 14.5 Marine pollutant:** No
- 14.6 Special precautions for user**
Special regulations: 223, 955, 163, 367
EmS Codes: F-E, S-E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
Segregation group: Non-applicable
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2022:



- 14.1 UN number or ID number:** UN1263
- 14.2 UN proper shipping name:** PAINT
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**
Physico-Chemical properties: see section 9
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
 Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
 Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
 Article 95, REGULATION (EU) No 528/2012: Non-applicable
 REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

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SECTION 15: REGULATORY INFORMATION (continued)

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Contains more than 0.1 % of Hexamethylene diisocyanate, oligomers by weight. 1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).

2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: "As from 24 August 2023 adequate training is required before industrial or professional use".

3. For the purpose of this entry "industrial and professional user(s)" means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.

4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:

(a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).

(b) the training elements in points (a) and (b) of paragraph 5 for the following uses:

- handling open mixtures at ambient temperature (including foam tunnels)
- spraying in a ventilated booth
- application by roller
- application by brush
- application by dipping and pouring
- mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore
- cleaning and waste
- any other uses with similar exposure through the dermal and/or inhalation route

(c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:

- handling incompletely cured articles (e.g. freshly cured, still warm)
- foundry applications
- maintenance and repair that needs access to equipment
- open handling of warm or hot formulations (> 45 °C)
- spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers)
- and any other uses with similar exposure through the dermal and/or inhalation route.

5. Training elements:

(a) general training, including on-line training, on:

- chemistry of diisocyanates
- toxicity hazards (including acute toxicity)
- exposure to diisocyanates
- occupational exposure limit values
- how sensitisation can develop
- odour as indication of hazard
- importance of volatility for risk
- viscosity, temperature, and molecular weight of diisocyanates
- personal hygiene
- personal protective equipment needed, including practical instructions for its correct use and its limitations
- risk of dermal contact and inhalation exposure
- risk in relation to application process used
- skin and inhalation protection scheme
- ventilation
- cleaning, leakages, maintenance
- discarding empty packaging
- protection of bystanders
- identification of critical handling stages
- specific national code systems (if applicable)
- behaviour-based safety

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SECTION 15: REGULATORY INFORMATION (continued)

- certification or documented proof that training has been successfully completed
 - (b) intermediate level training, including on-line training, on:
 - additional behaviour-based aspects
 - maintenance
 - management of change
 - evaluation of existing safety instructions
 - risk in relation to application process used
 - certification or documented proof that training has been successfully completed
 - (c) advanced training, including on-line training, on:
 - any additional certification needed for the specific uses covered
 - spraying outside a spraying booth
 - open handling of hot or warm formulations (> 45 °C)
 - certification or documented proof that training has been successfully completed
6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture (s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.
7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.
8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.
9. Member States shall include in their reports pursuant to Article 117(1) the following information:
- (a) any established training requirements and other risk management measures related to the industrial and professional uses of diisocyanates foreseen in national law
 - (b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates
 - (c) national exposure limits for diisocyanates, if there are any
 - (d) information about enforcement activities related to this restriction.
10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):

- Precautionary statements

Texts of the legislative phrases mentioned in section 2:

H317: May cause an allergic skin reaction.

H335: May cause respiratory irritation.

H332: Harmful if inhaled.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

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SECTION 16: OTHER INFORMATION (continued)

Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled.

Acute Tox. 4: H332 - Harmful if inhaled.

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

STOT SE 3: H335 - May cause respiratory irritation.

STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

Skin Sens. 1: Calculation method

STOT SE 3: Calculation method

Acute Tox. 4: Calculation method

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

LC50: Lethal Concentration 50

EC50: Effective concentration 50

LogPOW: Octanolwater partition coefficient

Koc: Partition coefficient of organic carbon

UFI: unique formula identifier

IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -