

# SAFETY DATA SHEET



## Hardtop Design Metallics Comp B

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

#### 1.1 Product identifier

|                                      |                                   |
|--------------------------------------|-----------------------------------|
| <b>Product name</b>                  | : Hardtop Design Metallics Comp B |
| <b>Product code</b>                  | : 43963                           |
| <b>Product description</b>           | : Hardener.                       |
| <b>Product type</b>                  | : Liquid.                         |
| <b>Other means of identification</b> | : Not available.                  |

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

Use in coatings - Industrial use  
Use in coatings - Professional use

#### 1.3 Details of the supplier of the safety data sheet

Jotun A/S  
P.O.Box 2021  
3202 Sandefjord  
Norway

Tel: + 47 33 45 70 00  
Fax: +47 33 45 72 42  
E-mail: SDSJotun@jotun.no

#### National contact

Jotun Italia S.r.l.  
Via Oliviero Petronio, 8  
34015 Muggia (TS)  
Italy

Tel: +39 040 23 98 111/23 98 203  
Fax: +39 040 4606968  
SDSJotun@jotun.com  
info@jotun.it

#### 1.4 Emergency telephone number

Per informazioni urgenti rivolgersi a  
Numeri telefonici dei principali centri antiveleni italiani (attivi 24/24 ore):  
Bergamo - Ospedali Riuniti di Bergamo - Numero verde 800 883300  
Catania - Ospedale Garibaldi - Tel.0957594120 – 0957594032, Numero verde 800 410989  
Chieti - Ospedale Santissima Annunziata - Tel.0871551219  
Firenze - Ospedale Careggi - Tel.055 7947819  
Genova - Ospedale San Martino - Tel.010352808  
La Spezia - Ospedale Civile Sant'Andrea - Tel.0187533297 – 0187533376  
Lecce - Presidio Ospedaliero n. 1 - Tel.0832351105  
Milano - Ospedale Riguarda Ca'Granda - Tel.0266101029  
Napoli - Ospedale Cardarelli - Tel.0817472870  
Pavia - Clinica del Lavoro e della Riabilitazione IRCCS - Tel.038224444  
Pordenone - Ospedale Civile - Tel.0434550301  
Reggio Calabria - Ospedali Riuniti - Tel.0965811624

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

Roma - Policlinico A. Gemelli - Tel.063054343

Ancona - Centro universitario ospedaliero di farmacovigilanza - Tel.072181028 (dalle 7.30 alle 13.30)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

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

Flam. Liq. 3, H226

Acute Tox. 4, H332

Skin Sens. 1, H317

STOT SE 3, H335

Aquatic Chronic 3, H412

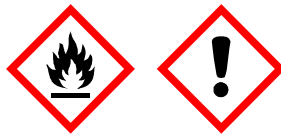
The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Warning.

**Hazard statements** : H226 - Flammable liquid and vapour.  
H317 - May cause an allergic skin reaction.  
H332 - Harmful if inhaled.  
H335 - May cause respiratory irritation.  
H412 - Harmful to aquatic life with long lasting effects.

### Precautionary statements

**General** : Not applicable.

**Prevention** : P280 - Wear protective gloves.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P273 - Avoid release to the environment.  
P261 - Avoid breathing vapour.

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

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

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

**Hazardous ingredients** : hexane, 1,6-diisocyanato-, homopolymer  
hexamethylene-di-isocyanate

**Supplemental label elements** : EUH204 - 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** : As from August 24 2023 adequate training is required before industrial or professional use.

### Special packaging requirements

Hardtop Design Metallics Comp B

## SECTION 2: Hazards identification

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

| Product/ingredient name                | Identifiers   | %         | Classification   | Specific Conc. Limits, M-factors and ATEs  | Type    |
|--|---|-----------|--|--|---------|
| hexane, 1,6-diisocyanato-, homopolymer | REACH #:<br>01-2119488934-20<br>EC: 500-060-2<br>CAS: 28182-81-2                      | ≥75 - ≤90 | Acute Tox. 4, H332<br>Skin Sens. 1, H317<br>STOT SE 3, H335  | ATE [Inhalation (dusts and mists)] = 1.5 mg/l  | [1]     |
| n-butyl acetate                        | REACH #:<br>01-2119485493-29<br>EC: 204-658-1<br>CAS: 123-86-4                        | <10       | Flam. Liq. 3, H226<br>STOT SE 3, H336<br>EUH066  | -  | [1] [2] |
| hydrocarbons, C9, aromatics            | REACH #:<br>01-2119455851-35<br>EC: 918-668-5<br>CAS: 128601-23-0                     | <10       | Flam. Liq. 3, H226<br>STOT SE 3, H335<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411<br>EUH066   | -  | [1]     |
| hexamethylene-diisocyanate             | REACH #:<br>01-2119457571-37<br>EC: 212-485-8<br>CAS: 822-06-0<br>Index: 615-011-00-1 | ≤0.3      | Acute Tox. 4, H302<br>Acute Tox. 1, H330<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317<br>STOT SE 3, H335<br><br><b>See Section 16 for the full text of the H statements declared above.</b> | ATE [Oral] = 746 mg/kg<br>ATE [Inhalation (vapours)] = 0.124 mg/l<br>Resp. Sens. 1, H334: C ≥ 0.5%<br>Skin Sens. 1, H317: C ≥ 0.5% | [1]     |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

### Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- 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** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- 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****Over-exposure signs/symptoms**

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

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

- 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.

See toxicological information (Section 11)

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

- Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO<sub>2</sub>, 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 combustion 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**

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## SECTION 5: Firefighting measures

- 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.

## 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 material 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 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

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

**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

Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Care should be taken when re-opening partly-used containers. Precautions should be taken to minimise exposure to atmospheric humidity or water. CO<sub>2</sub> will be formed, which, in closed containers, could result in pressurisation. 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.

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## SECTION 7: Handling and storage

Do not allow to enter drains or watercourses.

### Information on fire and explosion protection

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

### 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.

### Seveso Directive - Reporting thresholds

#### Danger criteria

| Category | Notification and MAPP threshold | Safety report threshold |
|----------|---------------------------------|-------------------------|
| P5c      | 5000 tonne                      | 50000 tonne             |

See Technical Data Sheet / packaging for further information.

### 7.3 Specific end use(s)

**Recommendations** : Not available.

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

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

| Product/ingredient name | Exposure limit values   |
|-------------------------|---|
| n-butyl acetate         | <b>EU OEL (Europe, 1/2022). Notes:</b><br>STEL: 150 ppm 15 minutes.<br>STEL: 723 mg/m <sup>3</sup> 15 minutes.<br>TWA: 241 mg/m <sup>3</sup> 8 hours.<br>TWA: 50 ppm 8 hours. |

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

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**SECTION 8: Exposure controls/personal protection**

| Product/ingredient name                | Type                        | Exposure              | Value                    | Population                     | Effects            |          |
|--|-----------------------------|-----------------------|--------------------------|--------------------------------|--------------------|----------|
| hexane, 1,6-diisocyanato-, homopolymer | DNEL                        | Long term Inhalation  | 0.5 mg/m <sup>3</sup>    | Workers                        | Local              |          |
|  | DNEL                        | Short term Inhalation | 1 mg/m <sup>3</sup>      | Workers                        | Local              |          |
| n-butyl acetate                        | DNEL                        | Short term Inhalation | 960 mg/m <sup>3</sup>    | Workers                        | Systemic           |          |
|  | DNEL                        | Short term Inhalation | 960 mg/m <sup>3</sup>    | Workers                        | Local              |          |
|  | DNEL                        | Long term Inhalation  | 480 mg/m <sup>3</sup>    | Workers                        | Systemic           |          |
|  | DNEL                        | Long term Inhalation  | 480 mg/m <sup>3</sup>    | Workers                        | Local              |          |
|  | DNEL                        | Short term Inhalation | 859.7 mg/m <sup>3</sup>  | General population [Consumers] | Systemic           |          |
|  | DNEL                        | Short term Inhalation | 859.7 mg/m <sup>3</sup>  | General population [Consumers] | Local              |          |
|  | DNEL                        | Long term Inhalation  | 102.34 mg/m <sup>3</sup> | General population [Consumers] | Systemic           |          |
|  | DNEL                        | Long term Inhalation  | 102.34 mg/m <sup>3</sup> | General population [Consumers] | Local              |          |
|  | DNEL                        | Long term Oral        | 2 mg/kg bw/day           | General population             | Systemic           |          |
|  | DNEL                        | Short term Oral       | 2 mg/kg bw/day           | General population             | Systemic           |          |
|  | DNEL                        | Long term Dermal      | 3.4 mg/kg bw/day         | General population             | Systemic           |          |
|  | DNEL                        | Short term Dermal     | 6 mg/kg bw/day           | General population             | Systemic           |          |
|  | DNEL                        | Long term Dermal      | 7 mg/kg bw/day           | Workers                        | Systemic           |          |
|  | DNEL                        | Short term Dermal     | 11 mg/kg bw/day          | Workers                        | Systemic           |          |
|  | DNEL                        | Long term Inhalation  | 12 mg/m <sup>3</sup>     | General population             | Systemic           |          |
|  | DNEL                        | Long term Inhalation  | 35.7 mg/m <sup>3</sup>   | General population             | Local              |          |
|  | hydrocarbons, C9, aromatics | DNEL                  | Long term Inhalation     | 48 mg/m <sup>3</sup>           | Workers            | Systemic |
|  |                             | DNEL                  | Short term Inhalation    | 300 mg/m <sup>3</sup>          | General population | Local    |
| DNEL                                   |                             | Short term Inhalation | 300 mg/m <sup>3</sup>    | General population             | Systemic           |          |
| DNEL                                   |                             | Long term Inhalation  | 300 mg/m <sup>3</sup>    | Workers                        | Local              |          |
| DNEL                                   |                             | Short term Inhalation | 600 mg/m <sup>3</sup>    | Workers                        | Local              |          |
| DNEL                                   |                             | Short term Inhalation | 600 mg/m <sup>3</sup>    | Workers                        | Systemic           |          |
| DNEL                                   |                             | Long term Dermal      | 12.5 mg/kg bw/day        | Workers                        | Systemic           |          |
| DNEL                                   |                             | Long term Inhalation  | 151 mg/m <sup>3</sup>    | Workers                        | Systemic           |          |
| DNEL                                   |                             | Long term Dermal      | 7.5 mg/kg bw/day         | General population [Consumers] | Systemic           |          |
| DNEL                                   |                             | Long term Inhalation  | 32 mg/m <sup>3</sup>     | General population             | Systemic           |          |

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**SECTION 8: Exposure controls/personal protection**

|                             |      |                       |                           |                                   |          |
|-----------------------------|------|-----------------------|---------------------------|-----------------------------------|----------|
| hexamethylene-di-isocyanate | DNEL | Long term Oral        | 7.5 mg/kg bw/day          | [Consumers]<br>General population | Systemic |
|                             | DNEL | Long term Inhalation  | 0.41 mg/m <sup>3</sup>    | [Consumers]<br>General population | Systemic |
|                             | DNEL | Long term Inhalation  | 1.9 mg/m <sup>3</sup>     | Workers                           | Systemic |
|                             | DNEL | Long term Inhalation  | 178.57 mg/m <sup>3</sup>  | General population                | Local    |
|                             | DNEL | Short term Inhalation | 640 mg/m <sup>3</sup>     | General population                | Local    |
|                             | DNEL | Long term Inhalation  | 837.5 mg/m <sup>3</sup>   | Workers                           | Local    |
|                             | DNEL | Short term Inhalation | 1066.67 mg/m <sup>3</sup> | Workers                           | Local    |
|                             | DNEL | Short term Inhalation | 1152 mg/m <sup>3</sup>    | General population                | Systemic |
|                             | DNEL | Short term Inhalation | 1286.4 mg/m <sup>3</sup>  | Workers                           | Systemic |
|                             | DNEL | Long term Inhalation  | 0.035 mg/m <sup>3</sup>   | Workers                           | Local    |
|                             | DNEL | Short term Inhalation | 0.07 mg/m <sup>3</sup>    | Workers                           | Local    |

**PNECs**

| Product/ingredient name     | Compartment Detail     | Value              | Method Detail |
|-----------------------------|------------------------|--------------------|---------------|
| n-butyl acetate             | Fresh water            | 0.18 mg/l          | -             |
|                             | Marine                 | 0.018 mg/l         | -             |
|                             | Sewage Treatment Plant | 35.6 mg/l          | -             |
| hexamethylene-di-isocyanate | Fresh water sediment   | 0.981 mg/kg dwt    | -             |
|                             | Marine water sediment  | 0.0981 mg/kg dwt   | -             |
|                             | Soil                   | 0.0903 mg/kg dwt   | -             |
|                             | Fresh water            | 0.0774 mg/l        | -             |
|                             | Marine                 | 0.00774 mg/l       | -             |
|                             | Sewage Treatment Plant | 8.42 mg/l          | -             |
|                             | Fresh water sediment   | 0.01334 mg/kg dwt  | -             |
|                             | Marine water sediment  | 0.001334 mg/kg dwt | -             |
|                             | Soil                   | 0.0026 mg/kg dwt   | -             |

**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 Occupational exposure controls.)

**Individual protection measures**



## 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 eyewear complying to ISO 16321-1:2022 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: safety glasses with side-shields.

### 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

Wear suitable gloves tested to ISO 374-1:2016.

Recommended, gloves(breakthrough time) > 8 hours: Teflon (> 0.35 mm), polyvinyl alcohol (PVA) (> 0.3 mm)  
Not recommended, gloves(breakthrough time) < 1 hour: neoprene (> 0.35 mm), PVC (> 0.5 mm), Viton® (> 0.7 mm)

May be used, gloves(breakthrough time) 4 - 8 hours: 4H/Silver Shield® (> 0.07 mm), butyl rubber (> 0.4 mm), nitrile rubber (> 0.75 mm)

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

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** : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

**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** : Self-contained respiratory equipment must be worn by spray operator, even when good ventilation is provided. By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask.

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

## SECTION 9: Physical and chemical properties

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

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state** : Liquid.

**Colour** : Clear.

**Odour** : Characteristic.

**Odour threshold** : Not applicable.

**Hardtop Design Metallics Comp B****SECTION 9: Physical and chemical properties**

|  |   |
|--|---|
| <b>Melting point/freezing point</b>            | : Not applicable.   |
| <b>Initial boiling point and boiling range</b> | : Lowest known value: 126°C (258.8°F) (n-butyl acetate). Weighted average: 149.25°C (300.6°F)                                 |
| <b>Flammability</b>                            | : Not applicable.   |
| <b>Lower and upper explosion limit</b>         | : Greatest known range: Lower: 1.4% Upper: 7.6% (n-butyl acetate)   |
| <b>Flash point</b>                             | : Closed cup: 47°C  |
| <b>Auto-ignition temperature</b>               | : Lowest known value: 280 to 470°C (536 to 878°F) (hydrocarbons, C9, aromatics).  |
| <b>Decomposition temperature</b>               | : Not available.  |
| <b>pH</b>                                      | : Not applicable.   |
| <b>Viscosity</b>                               | : Not available.  |
| <b>Solubility in water</b>                     | : cold water Not soluble<br>hot water Not soluble   |
| <b>Partition coefficient: n-octanol/ water</b> | : Not available.  |
| <b>Vapour pressure</b>                         | : Highest known value: 1.5 kPa (11.3 mm Hg) (at 20°C) (n-butyl acetate).<br>Weighted average: 0.09 kPa (0.68 mm Hg) (at 20°C) |
| <b>Evaporation rate</b>                        | : 1 (n-butyl acetate) compared with butyl acetate   |
| <b>Density</b>                                 | : 1.13 g/cm <sup>3</sup>  |
| <b>Vapour density</b>                          | : Highest known value: 4 (Air = 1) (n-butyl acetate).   |
| <b>Explosive properties</b>                    | : Not available.  |
| <b>Oxidising properties</b>                    | : Not available.  |
| <b>Particle characteristics</b>                |   |
| <b>Median particle size</b>                    | : Not applicable.   |

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

|  |   |
|--|---|
| <b>10.1 Reactivity</b>                         | : The product reacts slowly with water, resulting in the production of carbon dioxide.  |
| <b>10.2 Chemical stability</b>                 | : Stable under recommended storage and handling conditions (see Section 7).   |
| <b>10.3 Possibility of hazardous reactions</b> | : In closed containers, pressure build-up could result in distortion, expansion and, in extreme cases, bursting of the container.   |
| <b>10.4 Conditions to avoid</b>                | : In a fire, hazardous decomposition products may be produced.  |
| <b>10.5 Incompatible materials</b>             | : Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.  |
| <b>10.6 Hazardous decomposition products</b>   | : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.<br><br>Thermal decomposition (>200°C) may liberate relatively low concentrations of isocyanates. |

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

**Hardtop Design Metallics Comp B**

**SECTION 11: Toxicological information**

| Product/ingredient name     | Result                          | Species | Dose                  | Exposure |
|-----------------------------|---------------------------------|---------|-----------------------|----------|
| n-butyl acetate             | LC50 Inhalation Vapour          | Rat     | >21.1 mg/l            | 4 hours  |
|                             | LD50 Dermal                     | Rabbit  | >17600 mg/kg          | -        |
|                             | LD50 Oral                       | Rat     | 13100 mg/kg           | -        |
| hexamethylene-di-isocyanate | LC50 Inhalation Dusts and mists | Rat     | 124 mg/m <sup>3</sup> | 4 hours  |

**Acute toxicity estimates**

| Product/ingredient name                | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|--|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| Hardtop Design Metallics Comp B        | N/A          | N/A            | N/A                      | 82.7                        | 1.7                                 |
| hexane, 1,6-diisocyanato-, homopolymer | N/A          | N/A            | N/A                      | N/A                         | 1.5                                 |
| n-butyl acetate                        | 13100        | N/A            | N/A                      | N/A                         | N/A                                 |
| hexamethylene-di-isocyanate            | 746          | N/A            | N/A                      | 0.124                       | N/A                                 |

**Irritation/Corrosion**

| Product/ingredient name                | Result                   | Species                      | Score | Exposure | Observation |
|--|--------------------------|------------------------------|-------|----------|-------------|
| hexane, 1,6-diisocyanato-, homopolymer | Eyes - Moderate irritant | Rabbit                       | -     | 100 mg   | -           |
|  | Skin - Moderate irritant | Rabbit                       | -     | 500 mg   | -           |
| hexamethylene-di-isocyanate            | Eyes - Mild irritant     | Mammal - species unspecified | -     | -        | -           |
|  | Skin - Mild irritant     | Mammal - species unspecified | -     | -        | -           |

**Sensitisation**

| Product/ingredient name                | Route of exposure | Species                      | Result      |
|--|-------------------|------------------------------|-------------|
| hexane, 1,6-diisocyanato-, homopolymer | skin              | Mammal - species unspecified | Sensitising |
| hexamethylene-di-isocyanate            | skin              | Mammal - species unspecified | Sensitising |

**Mutagenicity**

No known significant effects or critical hazards.

**Carcinogenicity**

No known significant effects or critical hazards.

**Reproductive toxicity**

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Teratogenicity**

No known significant effects or critical hazards.

**Specific target organ toxicity (single exposure)**

| Product/ingredient name                | Category   | Route of exposure | Target organs                |
|--|------------|-------------------|------------------------------|
| hexane, 1,6-diisocyanato-, homopolymer | Category 3 | -                 | Respiratory tract irritation |
| n-butyl acetate                        | Category 3 | -                 | Narcotic effects             |
| hydrocarbons, C9, aromatics            | Category 3 | -                 | Respiratory tract irritation |
|  | Category 3 | -                 | Narcotic effects             |
| hexamethylene-di-isocyanate            | Category 3 | -                 | Respiratory tract irritation |

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**SECTION 11: Toxicological information****Specific target organ toxicity (repeated exposure)**

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

**Aspiration hazard**

| Product/ingredient name     | Result                         |
|-----------------------------|--------------------------------|
| hydrocarbons, C9, aromatics | ASPIRATION HAZARD - Category 1 |

**11.2 Information on other hazards****11.2.1 Endocrine disrupting properties**

Not available.

**11.2.2 Other information**

Not available.

**SECTION 12: Ecological information****12.1 Toxicity**

There are no data available on the mixture itself.

Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

| Product/ingredient name     | Result  | Species                  | Exposure                         |
|-----------------------------|---|--------------------------|----------------------------------|
| hydrocarbons, C9, aromatics | Acute EC50 <10 mg/l<br>Acute IC50 <10 mg/l<br>Acute LC50 <10 mg/l | Daphnia<br>Algae<br>Fish | 48 hours<br>72 hours<br>96 hours |

**Conclusion/Summary** : This material is harmful to aquatic life with long lasting effects.

**12.2 Persistence and degradability**

**Conclusion/Summary** : Not available.

| Product/ingredient name     | Aquatic half-life | Photolysis | Biodegradability |
|-----------------------------|-------------------|------------|------------------|
| hydrocarbons, C9, aromatics | -                 | -          | Not readily      |

**12.3 Bioaccumulative potential**

| Product/ingredient name                | LogP <sub>ow</sub> | BCF        | Potential |
|--|--------------------|------------|-----------|
| hexane, 1,6-diisocyanato-, homopolymer | 5.54               | 367.7      | low       |
| n-butyl acetate                        | 2.3                | -          | low       |
| hydrocarbons, C9, aromatics            | -                  | 10 to 2500 | high      |
| hexamethylene-di-isocyanate            | 0.02               | 57.63      | low       |

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Endocrine disrupting properties**

Not available.

*Hardtop Design Metallics Comp B***SECTION 12: Ecological information****12.7 Other adverse effects**

No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

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

**13.1 Waste treatment methods****Product**

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

**Hazardous waste** : Yes.

**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. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

| Type of packaging | European waste catalogue (EWC)   |
|-------------------|--|
| CEPE Guidelines   | 15 01 10* packaging containing residues of or contaminated by hazardous substances |

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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## SECTION 14: Transport information

|                                 | ADR/RID  | ADN  | IMDG  | IATA   |
|---------------------------------|--|--|---|--|
| 14.1 UN number or ID number     | UN1866   | UN1866   | UN1866  | UN1866   |
| 14.2 UN proper shipping name    | Resin solution   | Resin solution   | Resin solution  | Resin solution   |
| 14.3 Transport hazard class(es) | 3<br> | 3<br> | 3<br> | 3<br> |
| 14.4 Packing group              | III  | III  | III   | III  |
| 14.5 Environmental hazards      | No.  | Yes.   | No.   | No.  |

### Additional information

**ADR/RID**

: **Hazard identification number** 30  
**Tunnel code** (D/E)

ADR/RID: Viscous substance. Not goods of class 3, ref. 2.2.3.1.5 (only applicable to receptacles < 450 litre capacity).

**ADN**

: The product is only regulated as an environmentally hazardous substance when transported in tank vessels.

**IMDG**

: **Emergency schedules** F-E, S-E

IMDG: Viscous substance. Transport in accordance with 2.3.2.5 of the IMDG Code (only applicable to receptacles < 450 litre capacity).

**UN**

: UN: Viscous substance. Not goods of class 3, ref. 2.3.2.5 (only applicable to receptacles < 450 litre capacity).

**14.6 Special precautions for user**

: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Maritime transport in bulk according to IMO instruments**

: Not available.

## SECTION 15: Regulatory information

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

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

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

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

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

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## SECTION 15: Regulatory information

### Other EU regulations

**VOC** : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

**VOC for Ready-for-Use Mixture** : Not available.

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

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

### Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

### National regulations

**Industrial use** : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

**D.Lgs. 152/06** : Not determined.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

**15.2 Chemical safety assessment** : No Chemical Safety Assessment has been carried out.

**Hardtop Design Metallics Comp B****SECTION 16: Other information**

✔ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms**

: ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 vPvB = Very Persistent and Very Bioaccumulative

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

| Classification   | Justification   |
|--|---|
| Flam. Liq. 3, H226<br>Acute Tox. 4, H332<br>Skin Sens. 1, H317<br>STOT SE 3, H335<br>Aquatic Chronic 3, H412 | On basis of test data<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method |

**Full text of abbreviated H statements**

|        |  |
|--------|--|
| H226   | Flammable liquid and vapour.   |
| H302   | Harmful if swallowed.  |
| H304   | May be fatal if swallowed and enters airways.                              |
| 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.  |
| H336   | May cause drowsiness or dizziness.   |
| H411   | Toxic to aquatic life with long lasting effects.                           |
| H412   | Harmful to aquatic life with long lasting effects.                         |
| EUH066 | Repeated exposure may cause skin dryness or cracking.                      |

**Full text of classifications [CLP/GHS]**

|                   |   |
|-------------------|---|
| Acute Tox. 1      | ACUTE TOXICITY - Category 1                                   |
| Acute Tox. 4      | ACUTE TOXICITY - Category 4                                   |
| Aquatic Chronic 2 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2               |
| Aquatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3               |
| Asp. Tox. 1       | ASPIRATION HAZARD - Category 1                                |
| Eye Irrit. 2      | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2                |
| Flam. Liq. 3      | FLAMMABLE LIQUIDS - Category 3                                |
| Resp. Sens. 1     | RESPIRATORY SENSITISATION - Category 1                        |
| Skin Irrit. 2     | SKIN CORROSION/IRRITATION - Category 2                        |
| Skin Sens. 1      | SKIN SENSITISATION - Category 1                               |
| STOT SE 3         | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 |

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**Notice to reader**



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## **SECTION 16: Other information**

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.