

Hardtop Design Metallics Comp A

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

1.1 Product identifier

Product name	: Hardtop Design Metallics Comp A
Product code	: 43962
Product description	: Paint.
Product type	: Liquid.
Other means of identification	: 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 Boya Sanayi ve Ticaret A.Ş.
Balabandere Caddesi, Hilpark Suites Sitesi No: 10, İstinye 34460 Sarıyer, İstanbul

Tel. +90 212 279 7878
SDSJotun@jotun.com

Başvurulacak Kişi: Deren Ercan
deren.metiner@jotun.com

Original preparation date : 19.07.2023

1.4 Emergency telephone number

National Poison Information Center

- +90 224 442 82 93 Uludağ Üniversitesi Zehir Danışma Merkezi (www.uludag.edu.tr/uludag/zehir.html)
- a. ACİL DURUM TELEFONU: Zehirlenme durumlarında gerektiğinde ulusal zehir merkezinin (UZEM) 114 nolu telefonunu arayınız.
- b. ACİL İLK YARDIM MERKEZİ:112
- c. İTFAİYE:110

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to regulation SEA: RG.-10/12/2020-31330

Flam. Liq. 3, H226
Skin Sens. 1, H317
STOT SE 3, H336
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation SEA: RG.-10/12/2020-31330.

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

SECTION 2: Hazards identification

Hazard pictograms :



Signal word :

Warning.

Hazard statements :

H226 - Flammable liquid and vapour.
 H317 - May cause an allergic skin reaction.
 H336 - May cause drowsiness or dizziness.
 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 :

butyl acetate
 benzotriazol derivate
 decanedioic acid, 1,10-bis(1,2,2,6,6-pentamethyl-4-piperidiny) ester, mixt. with 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidiny) decanedioate
 2-hydroxyethyl methacrylate
 Methyl methacrylate
 isobutyl methacrylate

Supplemental label elements :

Not applicable.

Annex 17 - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles :

Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings :

Not applicable.

Tactile warning of danger :

Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB :

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	%	SEA: RG.-10/12/2020-31330	Type
n-butyl acetate	EC: 204-658-1 CAS: 123-86-4	≥25 - ≤50	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
2-butoxyethyl acetate	EC: 203-933-3 CAS: 112-07-2	≤3	Acute Tox. 4, H312 Acute Tox. 4, H332	[1] [2]
pentane-2,4-dione	EC: 204-634-0 CAS: 123-54-6 Index: 606-029-00-0	≤3	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 3, H331	[1] [2]
benzotriazol derivate	CAS: 104810-48-2	≤2.6	Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
decanedioic acid, 1,10-bis (1,2,2,6,6-pentamethyl-4-piperidiny) ester, mixt. with 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidiny) decanedioate	CAS: 1065336-91-5	≤1	Skin Sens. 1A, H317 Repr. 2, H361f Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
2-hydroxyethyl methacrylate	EC: 212-782-2 CAS: 868-77-9	≤0.3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]
Neodecanoic acid, zinc salt, basic	CAS: 84418-68-8	≤0.3	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411	[1]
Methyl methacrylate	EC: 201-297-1 CAS: 80-62-6	≤0.3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]
isobutyl methacrylate	EC: 202-613-0 CAS: 97-86-9	≤0.3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 STOT SE 3, H335 See Section 16 for the full text of the H statements declared above.	[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 or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

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

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

SECTION 4: First aid measures

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. 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

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : May cause drowsiness or dizziness.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- 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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 halogenated compounds
 carbonyl halides
 metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

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

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

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

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

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

See Technical Data Sheet / packaging for further information.

Regulation on the prevention of major industrial accidents and reduction of their effects - Reporting thresholds

Danger criteria

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

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
n-butyl acetate	EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes. TWA: 241 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
2-butoxyethyl acetate	TR ISGGM OEL (Turkey, 12/2013). Absorbed through skin. TWA: 133 mg/m ³ 8 hours. TWA: 20 ppm 8 hours. STEL: 333 mg/m ³ 15 minutes. STEL: 50 ppm 15 minutes.
pentane-2,4-dione	ACGIH TLV (United States, 1/2023). Absorbed through skin. TWA: 25 ppm 8 hours.
Methyl methacrylate	TR ISGGM OEL (Turkey, 12/2013). STEL: 100 ppm 15 minutes. TWA: 50 ppm 8 hours.

Biological exposure indices

No exposure indices known.

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

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
n-butyl acetate	DNEL	Short term Inhalation	960 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	960 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	480 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	480 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	859.7 mg/m ³	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	859.7 mg/m ³	General population [Consumers]	Local
	DNEL	Long term Inhalation	102.34 mg/m ³	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	102.34 mg/m ³	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	General	Systemic

SECTION 8: Exposure controls/personal protection

2-butoxyethyl acetate	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 ³	General population	Systemic	
	DNEL	Long term Inhalation	35.7 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	48 mg/m ³	Workers	Systemic	
	DNEL	Short term Inhalation	300 mg/m ³	General population	Local	
	DNEL	Short term Inhalation	300 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	300 mg/m ³	Workers	Local	
	DNEL	Short term Inhalation	600 mg/m ³	Workers	Local	
	DNEL	Short term Inhalation	600 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	80 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	133 mg/m ³	Workers	Systemic	
	DNEL	Short term Inhalation	200 mg/m ³	General population	Local	
	DNEL	Long term Oral	8.6 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Oral	36 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	72 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	102 mg/kg bw/day	General population	Systemic	
	pentane-2,4-dione	DNEL	Short term Dermal	120 mg/kg bw/day	Workers	Systemic
		DNEL	Long term Dermal	169 mg/kg bw/day	Workers	Systemic
DNEL		Short term Inhalation	333 mg/m ³	Workers	Local	
DNEL		Long term Oral	7 mg/kg bw/day	General population	Systemic	
DNEL		Long term Dermal	12 mg/kg bw/day	Workers	Systemic	
benzotriazol derivate	DNEL	Long term Inhalation	84 mg/m ³	Workers	Systemic	
	DNEL	Long term Oral	0.025 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.025 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	0.085 mg/m ³	General population	Systemic	
	DNEL	Long term Dermal	0.25 mg/kg bw/day	Workers	Systemic	
decanedioic acid, 1,10-bis (1,2,2,6,6-pentamethyl-4-piperidiny) ester, mixt. with 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidiny) decanedioate	DNEL	Long term Inhalation	0.35 mg/m ³	Workers	Systemic	
	DNEL	Long term Oral	0.18 mg/kg bw/day	General population	Systemic	

SECTION 8: Exposure controls/personal protection

2-hydroxyethyl methacrylate	DNEL	Long term Inhalation	0.31 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	0.9 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	1.27 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	1.8 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	0.83 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.83 mg/kg bw/day	General population	Systemic
Methyl methacrylate	DNEL	Long term Dermal	1.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2.9 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	4.9 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	1.5 mg/cm ²	General population	Local
	DNEL	Long term Dermal	1.5 mg/cm ²	General population	Local
	DNEL	Short term Dermal	1.5 mg/cm ²	Workers	Local
	DNEL	Long term Dermal	1.5 mg/cm ²	Workers	Local
	DNEL	Long term Oral	8.2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	8.2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	13.67 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	74.3 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	104 mg/m ³	General population	Local
	DNEL	Short term Inhalation	208 mg/m ³	General population	Local
	DNEL	Long term Inhalation	208 mg/m ³	Workers	Local
isobutyl methacrylate	DNEL	Long term Inhalation	348.4 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	416 mg/m ³	Workers	Local
	DNEL	Long term Dermal	3 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	66.5 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	366.4 mg/m ³	General population	Local
	DNEL	Long term Inhalation	409 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	415.9 mg/m ³	Workers	Systemic

PNECs

SECTION 8: Exposure controls/personal protection

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	-
	Fresh water sediment	0.981 mg/kg dwt	-
	Marine water sediment	0.0981 mg/kg dwt	-
	Soil	0.0903 mg/kg dwt	-

8.2 Exposure controls

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

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. 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.

Wear suitable gloves tested to ISO 374-1:2016.
 Not recommended, gloves(breakthrough time) < 1 hour: Viton® (> 0.7 mm), fluor rubber (> 0.35 mm)
 Recommended, gloves(breakthrough time) > 8 hours: polyvinyl alcohol (PVA) (> 0.3 mm), Teflon (> 0.35 mm), butyl rubber (> 0.4 mm)
 May be used, gloves(breakthrough time) 4 - 8 hours: 4H/Silver Shield® (> 0.07 mm), nitrile rubber (> 0.75 mm), neoprene (> 0.35 mm), PVC (> 0.5 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.

SECTION 8: Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Metallic
- Odour** : Characteristic.
- Odour threshold** : Not applicable.
- Melting point/freezing point** : Not applicable.
- Initial boiling point and boiling range** : Lowest known value: 126°C (258.8°F) (n-butyl acetate). Weighted average: 131.64°C (269°F)
- Flammability (solid, gas)** : Not applicable.
- Upper/lower flammability or explosive limits** : 1.3 - 11.6%
- Flash point** : Closed cup: 27°C (80.6°F)
- Auto-ignition temperature** : Lowest known value: 340°C (644°F) (2-butoxyethyl acetate).
- Decomposition temperature** : Not available.
- pH** : Not applicable.
- Viscosity** : Kinematic (40°C): >20.5 mm²/s
- Solubility(ies)** :

Media	Result
cold water	Not soluble
hot water	Not soluble

Partition coefficient: n-octanol/ water : Not available.

Vapour pressure : Highest known value: 1.5 kPa (11.3 mm Hg) (at 20°C) (n-butyl acetate). Weighted average: 1.37 kPa (10.28 mm Hg) (at 20°C)
Highest known value: 1 (n-butyl acetate) Weighted average: 0.92 compared with butyl acetate

Density : 1.06 to 1.081 g/cm³

Vapour density : Highest known value: 5.5 (Air = 1) (2-butoxyethyl acetate). Weighted average: 4.1 (Air = 1)

Explosive properties : Not available.

Oxidising properties : Not available.

SECTION 9: Physical and chemical properties

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:
oxidising materials
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Shelf life at 23 °C** : 24 month(s)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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	-
2-butoxyethyl acetate	LD50 Dermal	Rabbit	1500 mg/kg	-
	LD50 Oral	Mouse	951 mg/kg	-
pentane-2,4-dione	LD50 Oral	Rat	5050 mg/kg	-
2-hydroxyethyl methacrylate	LC50 Inhalation Vapour	Rat	78000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	7872 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Hardtop Design Metallics Comp A	41459.4	17158.5	N/A	154.2	N/A
n-butyl acetate	13100	N/A	N/A	N/A	N/A
2-butoxyethyl acetate	N/A	1500	N/A	11	N/A
pentane-2,4-dione	500	300	N/A	3	N/A
2-Hydroxyethyl methacrylate	5050	N/A	N/A	N/A	N/A
methyl methacrylate	7872	N/A	N/A	78	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-butoxyethyl acetate	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
pentane-2,4-dione	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	6 hours 11.2 Milliliters Intermittent	-

SECTION 11: Toxicological information

2-hydroxyethyl methacrylate	Skin - Mild irritant	Rabbit	-	488 milligrams	-
	Skin - Moderate irritant	Rabbit	-	48 hours 11.2 Milliliters Intermittent	-
	Skin - Moderate irritant	Rabbit	-	6 hours 33.6 Milliliters Intermittent	-
Methyl methacrylate	Eyes - Mild irritant	Mammal - species unspecified	-	-	-
	Skin - Mild irritant	Mammal - species unspecified	-	-	-
isobutyl methacrylate	Skin - Mild irritant	Mammal - species unspecified	-	-	-
	Eyes - Mild irritant	Mammal - species unspecified	-	-	-
	Skin - Mild irritant	Mammal - species unspecified	-	-	-

Conclusion/Summary : Not available.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
benzotriazol derivate	skin	Mammal - species unspecified	Sensitising
2-hydroxyethyl methacrylate	skin	Mammal - species unspecified	Sensitising
Methyl methacrylate	skin	Mammal - species unspecified	Sensitising
isobutyl methacrylate	skin	Mammal - species unspecified	Sensitising

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
n-butyl acetate	Category 3	-	Narcotic effects
Methyl methacrylate	Category 3	-	Respiratory tract irritation
isobutyl methacrylate	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

SECTION 11: Toxicological information

Not available.

Information on likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : May cause drowsiness or dizziness.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:
 - nausea or vomiting
 - headache
 - drowsiness/fatigue
 - dizziness/vertigo
 - unconsciousness
- Skin contact** : Adverse symptoms may include the following:
 - irritation
 - redness
- Ingestion** : No specific data.

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

Short term exposure

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

Long term exposure

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

Potential chronic health effects

Not available.

- Conclusion/Summary** : Not available.
- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure
pentane-2,4-dione	Acute EC50 75000 µg/l Fresh water	Crustaceans - Ceriodaphnia reticulata - Larvae	48 hours
	Acute LC50 47600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 60100 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute EC50 1.68 mg/l	Algae	96 hours
decanedioic acid, 1,10-bis (1,2,2,6,6-pentamethyl-4-piperidiny) ester, mixt. with 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidiny) decanedioate	Acute LC50 0.9 mg/l Chronic NOEC 1 mg/l	Fish Daphnia	96 hours 21 days
isobutyl methacrylate	Acute EC50 0.74 mg/l	Aquatic plants - Selenastrum capricornutum	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
benzotriazol derivate	-	-	Not readily
isobutyl methacrylate	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
n-butyl acetate	2.3	-	low
2-butoxyethyl acetate	1.51	-	low
pentane-2,4-dione	0.68	-	low
2-hydroxyethyl methacrylate	0.42	-	low
Methyl methacrylate	1.38	-	low
isobutyl methacrylate	2.95	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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 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

SECTION 13: Disposal considerations

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.

Waste list

Waste code	Waste code definition
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.

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

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	Paint	Paint	Paint	Paint
14.3 Transport hazard class(es)	3 	3 	3 	3 
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).

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

SECTION 14: Transport information

14.7 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
Turkey Regulation No. 30105, KKDIK

Annex 14 - List of substances subject to authorization

Annex 14

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex 17 - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Ozone depleting substances

Not listed.

Regulation on the prevention of major industrial accidents and reduction of their effects

This product is controlled under the Regulation on the prevention of major industrial accidents and reduction of their effects.

Danger criteria

Category

P5c

EU regulations

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

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Industrial emissions (integrated pollution prevention and control) - Air : Listed

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

Not listed.

Persistent Organic Pollutants

Not listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

SECTION 15: Regulatory information

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

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

SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
 EUH statement = SEA-specific Hazard statement
 N/A = Not available
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 SGG = Segregation Group
 vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to regulation SEA: RG.-10/12/2020-31330

Classification	Justification
Flam. Liq. 3, H226 Skin Sens. 1, H317 STOT SE 3, H336 Aquatic Chronic 3, H412	On basis of test data Calculation method Calculation method Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [SEA/GHS]

SECTION 16: Other information

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

Date of printing : 29.11.2023

Date of issue/ Date of revision : 29.11.2023

Date of previous issue : 19.07.2023

Version : 1.01

Contact information of certified author

Responsible Person: Deren Ercan
 Mail Address: deren.metiner@jotun.com
 Certificate No: LONCA KDU81/2021.26
 Certificate Expiration Date: 14.10.2026

Notice to reader

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.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.