

## Tankguard Type III Comp B

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

#### 1.1 Product identifier

<b>Product name</b>	: Tankguard Type III Comp B
<b>Product code</b>	: 27301
<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

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

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#### 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](http://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

Acute Tox. 4, H302  
Skin Corr. 1B, H314  
Eye Dam. 1, H318  
Skin Sens. 1, H317  
STOT RE 2, H373 (heart, kidneys, liver)  
Aquatic Chronic 2, H411

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** :

Danger.

**Hazard statements** :

H302 - Harmful if swallowed.  
 H314 - Causes severe skin burns and eye damage.  
 H317 - May cause an allergic skin reaction.  
 H373 - May cause damage to organs through prolonged or repeated exposure. (heart, kidneys, liver)  
 H411 - Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**General** :

Not applicable.

**Prevention** :

P280 - Wear protective gloves, protective clothing and eye or face protection.  
 P273 - Avoid release to the environment.  
 P260 - Do not breathe vapour.  
 P270 - Do not eat, drink or smoke when using this product.

**Response** :

P391 - Collect spillage.  
 P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor.  
 P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.  
 P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.  
 P363 - Wash contaminated clothing before reuse.  
 P302 + P352 - IF ON SKIN: Wash with plenty of water.  
 P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.  
 P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

**Storage** :

Not applicable.

**Disposal** :

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

**Hazardous ingredients** :

4,4'-methylenebis(cyclohexylamine)  
 formaldehyde, polymer with benzenamine, hydrogenated benzenedimethanamine, n-(2-phenylethyl) derivs.  
 3-aminopropyltriethoxysilane

**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
4,4'-methylenebis (cyclohexylamine)	EC: 217-168-8 CAS: 1761-71-3	≥50 - ≤75	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT RE 2, H373 (liver)	[1]
formaldehyde, polymer with benzenamine, hydrogenated	CAS: 135108-88-2	≥10 - ≤25	Acute Tox. 3, H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 (kidneys) (oral) Aquatic Chronic 3, H412	[1]
benzyl alcohol	EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥10 - ≤17	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	[1]
benzenedimethanamine, n-(2-phenylethyl) derivs.	CAS: 404362-22-7	≥10 - ≤17	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 (heart) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
3-aminopropyltriethoxysilane	EC: 213-048-4 CAS: 919-30-2	≤8.7	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317  <b>See Section 16 for the full text of the H statements declared above.</b>	[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

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

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

: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

**Inhalation**

: Get medical attention immediately. Call a poison center or physician. 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. 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.

**SECTION 4: First aid measures**

- Skin contact** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

**Over-exposure signs/symptoms**

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

**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 an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**5.2 Special hazards arising from the substance or mixture**

## SECTION 5: Firefighting measures

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic 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  
 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.

**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. Do not breathe 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. Collect spillage.

### 6.3 Methods and material for containment and cleaning up

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

**Large spill** : Stop leak if without risk. Move containers from spill area. 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 breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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 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. 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
E2	200 tonne	500 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

No exposure limit value known.

#### 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

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

Product/ingredient name	Type	Exposure	Value	Population	Effects	
4,4'-methylenebis(cyclohexylamine)	DNEL	Short term Dermal	0.63 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	1.5 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	0.21 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	0.5 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	0.125 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Oral	0.125 mg/kg bw/day	General population [Consumers]	Systemic	
	DNEL	Long term Dermal	0.053 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	0.13 mg/m <sup>3</sup>	Workers	Systemic	
formaldehyde, polymer with benzenamine, hydrogenated	DNEL	Long term Inhalation	0.2 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Long term Dermal	2 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	2 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Dermal	6 mg/kg bw/day	Workers	Systemic	
benzyl alcohol	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	4 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	5.4 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Dermal	8 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	20 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	22 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	27 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	110 mg/m <sup>3</sup>	Workers	Systemic	
	benzenedimethanamine, n-(2-phenylethyl) derivs.	DNEL	Long term Inhalation	0.002 mg/m <sup>3</sup>	General population	Local
		DNEL	Long term Inhalation	0.004 mg/m <sup>3</sup>	Workers	Local
DNEL		Long term Oral	0.03 mg/kg bw/day	General population	Systemic	
DNEL		Long term Dermal	0.03 mg/kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	0.04 mg/m <sup>3</sup>	General population	Systemic	
DNEL		Long term Dermal	0.05 mg/kg bw/day	Workers	Systemic	
DNEL		Long term Inhalation	0.18 mg/m <sup>3</sup>	Workers	Systemic	
3-aminopropyltriethoxysilane		DNEL	Short term Dermal	8.3 mg/kg bw/day	Workers	Systemic
	DNEL	Short term	59 mg/m <sup>3</sup>	Workers	Systemic	

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

	DNEL	Inhalation Long term Dermal	8.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	59 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Dermal	5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	17.4 mg/m <sup>3</sup>	General population [Consumers]	Systemic
	DNEL	Long term Dermal	5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	17.4 mg/m <sup>3</sup>	General population [Consumers]	Systemic
	DNEL	Long term Oral	1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	3.5 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	14 mg/m <sup>3</sup>	Workers	Systemic

**PNECs**

Product/ingredient name	Compartment Detail	Value	Method Detail
4,4'-methylenebis(cyclohexylamine)	Fresh water	0.008 mg/l	-
	Marine	0.0008 mg/l	-
	Sewage Treatment Plant	80 mg/l	-
	Fresh water sediment	0.39 mg/kg dwt	-
	Marine water sediment	0.039 mg/kg dwt	-
	Soil	0.072 mg/kg dwt	-
benzyl alcohol	Fresh water	1 mg/l	-
	Marine	0.1 mg/l	-
	Sewage Treatment Plant	39 mg/l	-
	Fresh water sediment	5.27 mg/kg dwt	-
	Marine water sediment	0.527 mg/kg dwt	-
	Soil	0.456 mg/kg dwt	-
3-aminopropyltriethoxysilane	Fresh water	0.33 mg/l	-
	Marine	0.033 mg/l	-
	Sewage Treatment Plant	13 mg/l	-
	Fresh water sediment	1.2 mg/kg dwt	-
	Marine water sediment	0.12 mg/kg dwt	-
	Soil	0.05 mg/kg dwt	-

**8.2 Exposure controls**

**Appropriate engineering controls**

: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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.  
 Recommended, gloves(breakthrough time) > 8 hours: neoprene (> 0.35 mm), 4H/Silver Shield® (> 0.07 mm), Viton® (> 0.7 mm)  
 May be used, gloves(breakthrough time) 4 - 8 hours: nitrile rubber (> 0.75 mm), butyl rubber (> 0.4 mm)  
 Not recommended, gloves(breakthrough time) < 1 hour: 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.
- 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.
- 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**

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Clear.
<b>Odour</b>	: Characteristic.
<b>Odour threshold</b>	: Not applicable.
<b>Melting point/freezing point</b>	: Not applicable.
<b>Initial boiling point and boiling range</b>	: Lowest known value: 205.3°C (401.5°F) (benzyl alcohol). Weighted average: 289.18°C (552.5°F)
<b>Flammability (solid, gas)</b>	: Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: 1.3 - 13%
<b>Flash point</b>	: Closed cup: 90°C (194°F)
<b>Auto-ignition temperature</b>	: Lowest known value: 300°C (572°F) (cyclohexanamine, 4,4'-methylenebis-).
<b>Decomposition temperature</b>	: Not available.
<b>pH</b>	: Not applicable.
<b>Viscosity</b>	: Not available.
<b>Solubility(ies)</b>	:

Media	Result
cold water	Not soluble
hot water	Not soluble

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

**Vapour pressure** : Highest known value: 0.008 kPa (0.06 mm Hg) (at 20°C) (3-aminopropyltriethoxysilane). Weighted average: 0.001 kPa (0.008 mm Hg) (at 20°C)  
0.007 (benzyl alcohol) compared with butyl acetate

**Density** : 0.984 g/cm<sup>3</sup>

**Vapour density** : Highest known value: 3.7 (Air = 1) (benzyl alcohol).

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: No specific data.
<b>10.5 Incompatible materials</b>	: No specific data.
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
formaldehyde, polymer with benzenamine, hydrogenated	LD50 Oral	Rat	300 mg/kg	-
benzyl alcohol	LD50 Oral	Rat	1230 mg/kg	-
3-aminopropyltriethoxysilane	LD50 Oral	Rat	1780 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)
Tankguard Type III Comp B	526.5	N/A	N/A	N/A	15
cyclohexanamine, 4,4'-methylenebis-	500	N/A	N/A	N/A	N/A
formaldehyde, polymer with benzenamine, hydrogenated	300	N/A	N/A	N/A	N/A
benzyl alcohol	1230	N/A	N/A	N/A	1.5
benzenedimethanamine, n-(2-phenylethyl) derivs.	1000	N/A	N/A	N/A	N/A
3-aminopropyltriethoxysilane	1780	N/A	N/A	N/A	N/A

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
4,4'-methylenebis (cyclohexylamine)	Eyes - Severe irritant	Rabbit	-	24 hours 10 microliters	-
benzyl alcohol	Eyes - Mild irritant	Mammal - species unspecified	-	-	-

**Conclusion/Summary** : Not available.

**Sensitisation**

Product/ingredient name	Route of exposure	Species	Result
4,4'-methylenebis (cyclohexylamine)	skin	Mammal - species unspecified	Sensitising
benzenedimethanamine, n-(2-phenylethyl) derivs.	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)**

Not available.

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

**SECTION 11: Toxicological information**

Product/ingredient name	Category	Route of exposure	Target organs
4,4'-methylenebis(cyclohexylamine) formaldehyde, polymer with benzenamine, hydrogenated benzenedimethanamine, n-(2-phenylethyl) derivs.	Category 2 Category 2 Category 2	- oral -	liver kidneys heart

**Aspiration hazard**

Not available.

**Information on likely routes of exposure** : Not available.**Potential acute health effects**

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics**

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

**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** : May cause damage to organs through prolonged or repeated exposure. 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**

Product/ingredient name	Result	Species	Exposure
4,4'-methylenebis (cyclohexylamine)	Acute EC50 6.84 mg/l	Daphnia	48 hours
	Acute IC50 140 mg/l	Algae	72 hours
	Acute LC50 46 mg/l	Fish	96 hours

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

**12.2 Persistence and degradability**

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
4,4'-methylenebis (cyclohexylamine)	-	-	Not readily
benzyl alcohol	-	-	Readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
4,4'-methylenebis (cyclohexylamine)	2.03	-	low
formaldehyde, polymer with benzenamine, hydrogenated	-	209 to 219	low
benzyl alcohol	0.87	<100	low
3-aminopropyltriethoxysilane	1.7	3.4	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 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.

**Waste list**

Waste code	Waste code definition
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous substances








## SECTION 13: Disposal considerations

### 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	UN2735	UN2735	UN2735	UN2735
<b>14.2 UN proper shipping name</b>	Amines, liquid, corrosive, n.o.s. (benzenedimethanamine, n-(2-phenylethyl) derivs., 3-aminopropyltriethoxysilane)	Amines, liquid, corrosive, n.o.s. (benzenedimethanamine, n-(2-phenylethyl) derivs., 3-aminopropyltriethoxysilane)	Amines, liquid, corrosive, n.o.s. (benzenedimethanamine, n-(2-phenylethyl) derivs., 3-aminopropyltriethoxysilane). Marine pollutant (benzenedimethanamine, n-(2-phenylethyl) derivs.)	Amines, liquid, corrosive, n.o.s. (benzenedimethanamine, n-(2-phenylethyl) derivs., 3-aminopropyltriethoxysilane)
<b>14.3 Transport hazard class(es)</b>	8  	8  	8  	8 
<b>14.4 Packing group</b>	II	II	II	II
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

### Additional information

**ADR/RID** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

**Hazard identification number** 80

**Special provisions** 274

**Tunnel code** (E)

**ADN** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

**Emergency schedules** F-A, S-B

Segregation Group: 18 - Alkalis

**IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

**Marking** : The environmental hazardous / marine pollutant mark is only applicable for packages containing more than 5 litres for liquids and 5 kg for solids.

**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
E2

### 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.

### 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.

### Montreal Protocol

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

## SECTION 15: Regulatory information

Not listed.

### [Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

### [UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

**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
Acute Tox. 4, H302	Calculation method
Skin Corr. 1B, H314	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
STOT RE 2, H373 (heart, kidneys, liver)	Calculation method
Aquatic Chronic 2, H411	Calculation method

### [Full text of abbreviated H statements](#)

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
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 \[SEA/GHS\]](#)

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 Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

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## SECTION 16: Other information

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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.