SAFETY DATA SHEET



Muki Z 2008 Comp A

SDS Number: AA00319-000000272

In accordance with the Standard for Classification and Labeling of Chemical Substance and Safety Data Sheet, Article 10 Paragraph 1

Section 1. Chemical product and company identification

A. Product name

: Muki Z 2008 Comp A

- Product code
 Product description
- : 7581
- on : Paint.

use

B. <u>Relevant identified uses of the substance or mixture and uses advised against</u>

| Identified uses |
|------------------------------|
| Use in coatings - Industrial |

| С. | Manufacturer | 1 | Chokwang Jotun Ltd. |
|----|----------------------------|---|---|
| | | | 96, Gwahaksandan 1-ro |
| | | | Gangseo-gu, Busan |
| | | | South Korea |
| | | | Tel: +82 51 797 6000 |
| | | | Fax: +82 51 711 7735 |
| | | | SDSJotun@jotun.com |
| | Emergency telephone number | : | H.G.LEE Chokwang Jotun Ltd. Tel: +82 51 797 6000 |

Section 2. Hazards identification

| A. Hazard classification | FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3 |
|--------------------------|--|
| | This product is classified in accordance with the Industrial Safety and Health Act and the Chemical Control Act. |

B. <u>GHS label elements, including precautionary statements</u> Symbol :



| Signal word | : Danger. |
|-------------------|--|
| Hazard statements | H225 - Highly flammable liquid and vapour. H315 - Causes skin irritation. H318 - Causes serious eye damage. H336 - May cause drowsiness or dizziness. |

Precautionary statements

Section 2. Hazards identification

| Prevention | : P280 - Wear protective gloves, protective clothing and eye or face protection. |
|------------|---|
| | P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition |
| | sources. No smoking. P271 Line only outdoors or in a well ventilated area |
| | P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapour. |
| | P264 - Wash hands thoroughly after handling. |
| Response | P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P302 + P352 - IF ON SKIN: Wash with plenty of water. P332 + P313 - If skin irritation 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 | P405 - Store locked up. 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. |

С.

| Other hazards which do | 1 | None known. |
|------------------------|---|-------------|
| not result in | | |
| classification | | |

Section 3. Composition/information on ingredients

| Substance/mixture |
|-------------------|
| Other means of |
| identification |

: Mixture

: Not available.

| Ingredient name | Common name | Identifiers | % |
|--|---|-----------------|-----------|
| ethanol | ethanol | CAS: 64-17-5 | ≥40 - ≤45 |
| propan-2-ol | propan-2-ol | CAS: 67-63-0 | ≥25 - ≤30 |
| butan-1-ol | n-butanol | CAS: 71-36-3 | ≤14 |
| Silicic acid (H4SiO4), tetraethyl ester, hydrolyzed | silicic acid, tetraethyl ester, hydrolyzed | CAS: 68412-37-3 | ≤10 |
| tetraethyl silicate | tetraethyl silicate | CAS: 78-10-4 | ≤5 |

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 and hence require reporting in this section.

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

Section 4. First aid measures

A. 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.

| Section 4. First aid measures | | | | |
|-------------------------------|--|--|--|--|
| B. Skin contact | : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of 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. Wash clothing before reuse. Clean shoes thoroughly before reuse. | | | |
| C. 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. | | | |
| D. 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. | | | |
| E. Notes to physician | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. | | | |
| Specific treatments | : No specific treatment. | | | |
| 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. | | | |

See toxicological information (Section 11)

Section 5. Firefighting measures

| Α. | Extinguishing media | | |
|----|---|---|---|
| | Suitable extinguishing media | : | Use dry chemical, CO ₂ , water spray (fog) or foam. |
| | Unsuitable extinguishing media | : | Do not use water jet. |
| В. | Specific hazards arising from the chemical | : | Highly 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. |
| | Hazardous thermal decomposition products | : | Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides |
| C. | 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. |

Section 5. Firefighting measures

| Special precautions for | : Promptly isolate the scene by removing all persons from the vicinity of the incident if |
|-------------------------|---|
| fire-fighters | 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. |

Section 6. Accidental release measures

| Α. | Personal precautions, protective equipment and emergency procedures | : | 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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. | | |
|------------|--|---|---|--|--|
| в. | 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). | | |
| c . | 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. | | |
| | 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 (see Section 13). | | |

Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for

emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

| Α. | Precautions for safe hand | lling |
|----|--|---|
| | Protective measures | : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. 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. |
| В. | 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 |

Section 7. Handling and storage

before handling or use.

Section 8. Exposure controls/personal protection

A. Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits | | | |
|---------------------|---------------------------------------|--|--|--|
| ethanol | Ministry of Employment and Labor | | | |
| | (Republic of Korea, 1/2020). | | | |
| | TWA: 1000 ppm 8 hours. | | | |
| propan-2-ol | Ministry of Employment and Labor | | | |
| | (Republic of Korea, 1/2020). | | | |
| | STEL: 400 ppm 15 minutes. | | | |
| | TWA: 200 ppm 8 hours. | | | |
| butan-1-ol | Ministry of Employment and Labor | | | |
| | (Republic of Korea, 1/2020). Absorbed | | | |
| | through skin. | | | |
| | TWA: 20 ppm 8 hours. | | | |
| tetraethyl silicate | Ministry of Employment and Labor | | | |
| | (Republic of Korea, 1/2020). | | | |
| | TWA: 10 ppm 8 hours. | | | |

| | | | Date of revision | : 23.04.2024 |
|----|------------------------------------|-----------|---|--|
| | | | Wear suitable gloves tested to ISO 374-1:2016. Recommended, gloves(breakthrough time) > 8 hours: nitrile rubbe butyl rubber (> 0.4 mm), Viton® (> 0.7 mm), 4H/Silver Shield® (> May be used, gloves(breakthrough time) 4 - 8 hours: neoprene (> (> 0.35 mm) Not recommended, gloves(breakthrough time) < 1 hour: PVC (> 0 alcohol (PVA) (> 0.3 mm) | 0.07 mm) 0.35 mm), Teflon |
| | | | The performance or effectiveness of the glove may be reduced by damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin applied once exposure has occurred. | |
| | | | material. Always ensure that gloves are free from defects and that they are correctly. | stored and used |
| | Hand protection | : | There is no one glove material or combination of materials that wi resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of t The instructions and information provided by the glove manufactur storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of dar | he product. rer on use, |
| | Eye protection | | Use safety eyewear designed to protect against splash of liquids. | |
| | Respiratory protection | : | If workers are exposed to concentrations above the exposure limit respirator according to EN 140. Use respiratory mask with charco when spraying this product, according to EN 14387(as filter comb confined spaces, use compressed-air or fresh-air respiratory equit of roller or brush, consider use of charcoalfilter. | al and dust filter ination A2-P2). In |
| C. | Personal protective equip | <u>om</u> | <u>ent</u> | |
| | Environmental exposure controls | : | Emissions from ventilation or work process equipment should be they comply with the requirements of environmental protection leg cases, fume scrubbers, filters or engineering modifications to the equipment will be necessary to reduce emissions to acceptable le | islation. In some process |
| В. | Appropriate engineering controls | : | Use only with adequate ventilation. Use process enclosures, local ventilation or other engineering controls to keep worker exposure contaminants below any recommended or statutory limits. The er also need to keep gas, vapour or dust concentrations below any le limits. Use explosion-proof ventilation equipment. | to airborne ngineering controls |
| | | | | |

Section 8. Exposure controls/personal protection

| | 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 | : Use chemical-resistant protective suit / disposable overall. |
| | 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. |
| 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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |

Section 9. Physical and chemical properties

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

| Α. | <u>Appearance</u> | | |
|------------|---|---|--|
| | Physical state | ; | Liquid. |
| | Colour | : | Green., Grey |
| В. | Odour | : | Characteristic. |
| C . | Odour threshold | : | Not applicable. |
| D. | рН | 1 | Not applicable. |
| Е. | Melting/freezing point | 1 | 0 |
| F. | Boiling point, initial boiling point, and boiling range | : | >36°C (>96.8°F) |
| G. | Flash point | : | Closed cup: 14°C |
| H. | Evaporation rate | : | Highest known value: 1.7 (ethanol) Weighted average: 1.49compared with butyl acetate |
| Ι. | Flammability (solid, gas) | : | Not applicable. |
| J. | Lower and upper explosive (flammable) limits | : | 1.3 - 23% |
| K. | Vapour pressure | : | Highest known value: 5.7 kPa (42.9 mm Hg) (at 20°C) (ethanol). Weighted average: 4.3 kPa (32.25 mm Hg) (at 20°C) |
| L. | Solubility | : | cold waterEasily solublehot waterEasily soluble |
| Μ. | Vapour density | : | Highest known value: 7.22 (Air = 1) (tetraethyl silicate). Weighted average: 2.19 (Air = 1) |
| Ν. | Relative density | : | Ø.866 g/cm ³ |
| O . | Partition coefficient: n- octanol/water | : | Not available. |
| Ρ. | Auto-ignition temperature | : | Lowest known value: 222°C (431.6°F) (tetraethyl silicate). |
| Q. | Decomposition temperature | : | Not available. |
| R. | Viscosity | : | Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt) |
| S. | Molecular weight | : | Not applicable. |

Section 9. Physical and chemical properties

Particle characteristics

Median particle size

: Not applicable.

Section 10. Stability and reactivity

| Α. | Chemical stability Possibility of hazardous | | The product is stable. Under normal conditions of storage and use, hazardous reactions will not occur. |
|------------|--|---|---|
| | reactions | | |
| в. | 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. |
| C . | Incompatible materials | : | Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids. |
| D. | Hazardous decomposition products | : | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | | - | |

Section 11. Toxicological information

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

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Ingestion may cause nausea, diarrhea and vomiting.

: Not available. A. Information on likely routes of exposure

| Potential acute health e | ffects |
|--------------------------|---|
| Inhalation | : May cause drowsiness or dizziness. |
| Ingestion | : No known significant effects or critical hazards. |
| Skin contact | : Causes skin irritation. |
| Eye contact | : Causes serious eye damage. |
| Over-exposure signs/sy | <u>mptoms</u> |
| Inhalation | : Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness |
| Ingestion | : Adverse symptoms may include the following: stomach pains |
| Skin contact | : Adverse symptoms may include the following: pain or irritation redness blistering may occur |
| Eye contact | : Adverse symptoms may include the following: pain watering redness |
| B. Health hazards | |

Acute toxicity

Section 11. Toxicological information

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|------------------------|---------|--------------------------|----------|
| ethanol | LC50 Inhalation Vapour | Rat | 124700 mg/m ³ | 4 hours |
| propan-2-ol | LD50 Dermal | Rabbit | 12800 mg/kg | - |
| | LD50 Oral | Rat | 5000 mg/kg | - |
| butan-1-ol | LD50 Oral | Rat | 790 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|--------------------------|------------------------------------|-------|-------------------------------|-------------|
| ethanol | Eyes - Moderate irritant | Rabbit | - | 100 microliters | - |
| | Skin - Mild irritant | Rabbit | - | 400 milligrams | - |
| propan-2-ol | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 500 milligrams | - |
| tetraethyl silicate | Eyes - Mild irritant | Mammal - species unspecified | - | - | - |

Sensitisation

Not available.

CMR - ISHA Article 42 Occupational Exposure Limits

| Product/ingredient name | Identifiers | Classification | Classification | | | |
|--|-----------------------------------|-------------------|-------------------------------|--|--|--|
| Ethanol | CAS: 64-17-5 | CARCINOGEN | CARCINOGENICITY - Category 1A | | | |
| Mutagenicity | | | | | | |
| Conclusion/Summary : No known si | gnificant effects or critical haz | ards. | | | | |
| <u>Carcinogenicity</u> | | | | | | |
| Conclusion/Summary : No known si | gnificant effects or critical haz | ards. | | | | |
| Reproductive toxicity | | | | | | |
| Not available. | | | | | | |
| <u>Teratogenicity</u> | | | | | | |
| Conclusion/Summary : No known si | gnificant effects or critical haz | ards. | | | | |
| Specific target organ toxicity (single exp | <u>osure)</u> | | | | | |
| Product/ingredient name | Category | Route of exposure | Target organs | | | |
| <u> </u> | | | | | | |

| | | exposure | |
|---------------------|--------------------------|----------|---|
| propan-2-ol | Category 3 | - | Narcotic effects |
| butan-1-ol | Category 3 | - | Respiratory tract irritation |
| tetraethyl silicate | Category 3 Category 3 | - | Narcotic effects Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Potential chronic health effects

Chronic toxicity

General

Mutagenicity

- : No known significant effects or critical hazards.
- Carcinogenicity
- : No known significant effects or critical hazards.
- : No known significant effects or critical hazards.

Section 11. Toxicological information

Reproductive toxicity

: No known significant effects or critical hazards.

Numerical measures of toxicity

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) |
|-------------------------|------------------|-------------------|--------------------------------|-----------------------------------|--|
| Muki Z 2008 Comp A | 4698.8 | N/A | N/A | 243.6 | N/A |
| ethanol | 7000 | N/A | N/A | 124.7 | N/A |
| propan-2-ol | 5000 | 12800 | N/A | N/A | N/A |
| butan-1-ol | 500 | N/A | N/A | N/A | N/A |
| tetraethyl silicate | N/A | N/A | N/A | 11 | N/A |

Section 12. Ecological information

A. <u>Ecotoxicity</u>

No known significant effects or critical hazards.

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|--------|--|----------------------|
| | 5 | Daphnia - Daphnia magna Fish - Rasbora heteromorpha | 48 hours 96 hours |

B. Persistence and degradability

Not available.

C. Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|-----|-----------|
| ethanol | -0.35 | - | low |
| propan-2-ol | 0.05 | - | low |
| butan-1-ol | 1 | - | low |
| tetraethyl silicate | 3.18 | - | low |

D. <u>Mobility in soil</u> Soil/water partition : Not available. coefficient (Koc)

E. Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

| Α. | Disposal methods : | 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. |
|----|----------------------|---|
| В. | Disposal 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

| | UN | IMDG | ΙΑΤΑ |
|--|--------|--------|--|
| A. UN number | UN1263 | UN1263 | UN1263 |
| B. UN proper shipping name | Paint | Paint | Paint |
| C. Transport hazard class(es) | 3 | 3 | 3 |
| D. Packing group | 11 | II | II |
| E. Environmental hazards | No. | No. | No. |
| Additional informat | ion | | |
| IMDG ADR/RID | | | |
| user upright and secure | | | ansport in closed containers that are porting the product know what to do in |
| Transport in bulk according : Not available. | | | |

to IMO instruments

Transport in accordance with ADR/RID, IMDG/IMO and ICAO/IATA and national regulation.

Section 15. Regulatory information

| Α. | Regulation according to l | Regulation according to ISHA | | | | |
|----|--|------------------------------|------------------------------------|--|--|--|
| | ISHA article 117 (Harmful substances prohibited from manufacture) | : | None of the components are listed. | | | |
| | ISHA article 118 (Harmful substances requiring permission) | : | None of the components are listed. | | | |
| | Article 2 of Youth Protection Act on Substances Hazardous to Youth | : | Not applicable. | | | |
| | Exposure Limits of Chemical Substances and Physical Factors | | | | | |
| | The following components ethanol propan-2-ol butan-1-ol tetraethyl silicate | ha | ave an OEL: | | | |
| | ISHA Enforcement Regs Annex 19 (Exposure standards established for harmful factors) | : | None of the components are listed. | | | |
| | | | | | | |

Section 15. Regulatory information

| | ISHA Enforcement Regs Annex 21 (Harmful factors subject to Work Environment Measurement) | : | The following components are listed: isopropyl alcohol, silicates, n-butanol |
|----|---|-------------|---|
| | ISHA Enforcement Regs Annex 22 (Harmful Factors Subject to Special Health Check- up) | : | The following components are listed: Isopropyl alcohol, n-Butanol |
| | Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control) | : | The following components are listed: isopropyl alcohol, n-butanol |
| В. | Regulation according to | Ch | emicals Control Act |
| | AREC Article 17 (TRI) | 1 | The following components are listed: 2-Propanol |
| | AREC Article 32 (Banned) | : | None of the components are listed. |
| | Article 19 Subject to authorization (K-Reach Article 25) | : | None of the components are listed. |
| | AREC Toxic chemicals | 1 | Not applicable |
| | AREC Article 32 (Restricted) | : | None of the components are listed. |
| | CCA Article 39 (Accident Precaution Chemicals) | : | None of the components are listed. |
| | Existing Chemical Substances Subject to Registration | - | The following components are listed: Hydrogen chloride |
| C. | Dangerous Materials Safety Management Act | : | Class: Class 4 - Flammable Liquid Item: 3. Alcohols Threshold: 400 L Danger category: II |
| D. | Wastes regulation | : | Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Е. | Regulation according to | oth | <u>er foreign laws</u> |
| | International regulations | | |
| | Chemical Weapon Conv Not listed. | <u>en</u> | tion List Schedules I, II & III Chemicals |
| | Montreal Protocol Not listed. | | |
| | Stockholm Convention Not listed. | <u>on</u> | Persistent Organic Pollutants |
| | Rotterdam Convention of Not listed. | <u>on</u> | Prior Informed Consent (PIC) |
| | UNECE Aarhus Protoco Not listed. | <u>l oı</u> | n POPs and Heavy Metals |

Section 16. Other information

| A. References | Registry of Toxic Effects of Chemical Substances United States Environmental Protection Agency ECOTOX |
|---------------------------|---|
| B. Date of issue | : 25.01.2022 |
| Date of revision | : 23.04.2024 |
| C. Version | : 1.04 |
| Date of printing | : 23.04.2024 |
| D. Other | |
| Indicates information the | nat has changed from previously issued version. |
| Key to abbreviations | : ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations |
| Notion to reador | |

Notice to reader

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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.