

SAFETY DATA SHEET



Jotashield Heritage Topcoat Clear Matt

Section 1. Chemical product and company identification

Product name : Jotashield Heritage Topcoat Clear (Matt)
娇妍彩砂水性透明罩面漆JST-500 (哑光)

Product code : 29582

Product type : Liquid.

Product description : Waterborne paint.

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

Use in coatings - Consumer use: Apply this product only as specified on the label.

Supplier's details : 佐敦涂料(张家港)有限公司
中国江苏扬子江国际化学工业园南海路39号 215634
电话: +86 512 58937988
传真: +86 512 58937986

Jotun Coatings (Zhangjiagang) Co. Ltd
NO.39 Nanhai Road Jiangsu Yangtze River International Chemical Industry Park,
Jiangsu Province 215634 China
Tel: +86 512 58937988
Fax: +86 512 58937986

中远佐敦船舶涂料(青岛)有限公司
中国山东省青岛市高新区春阳路800号
总机电话: +86-532-68689888
总机传真: +86-532-66726750

Jotun COSCO Marine Coatings (Qingdao) Co. Ltd.
No. 800, Chunyang Road, High-tech Zone, Qingdao, P. R. China
Tel: +86-532-68689888
Fax: +86-532-66726750

SDSJotun@jotun.com

Emergency telephone number (with hours of operation) : Emergency Services for Chemical Incident of China. Tel: +86 532 83889090

Section 2. Hazards identification

Classification of the substance or mixture according to GB 13690-2009 and GB 30000-2013

Classification of the substance or mixture : SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

GHS label elements

Section 2. Hazards identification

| | |
|---------------------------------|--|
| Signal word | : No signal word. |
| Hazard statements | : H412 - Harmful to aquatic life with long lasting effects. |
| Precautionary statements | |
| General | : Not applicable. |
| Prevention | : P273 - Avoid release to the environment. |
| Response | : Not applicable. |
| Storage | : Not applicable. |
| Disposal | : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |

Physical and chemical hazards : No known significant effects or critical hazards.

Health hazards : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

| | |
|--------------------------------------|------------------|
| Substance/mixture | : Mixture |
| Other means of identification | : Not available. |

| Ingredient name | % | CAS number |
|-------------------------------|--------|------------|
| alcohols, c12-15, ethoxylated | <1 | 68131-39-5 |
| C(M)IT/MIT (3:1) | <0.003 | 55965-84-9 |
| zinc pyrithione | ≤0.001 | 13463-41-7 |

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

Description of necessary 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. Get medical attention if irritation occurs. |
| Inhalation | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| Skin contact | : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| Ingestion | : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. |

Most important symptoms/effects, acute and delayed

Potential acute health effects

| | |
|---------------------|---|
| Eye contact | : No known significant effects or critical hazards. |
| Inhalation | : No known significant effects or critical hazards. |
| Skin contact | : No known significant effects or critical hazards. |
| Ingestion | : No known significant effects or critical hazards. |

Over-exposure signs/symptoms

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

Section 4. First aid measures

- Inhalation** : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- 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.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

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

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. 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
metal oxide/oxides

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.

Section 6. Accidental release measures

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. 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".

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.

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.

Section 6. Accidental release measures

- 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 (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

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. 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.

- 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. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

- 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.

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. 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.

Section 8. Exposure controls/personal protection

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. May be used, gloves(breakthrough time) 4 - 8 hours: 4H/Silver Shield® (> 0.07 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.

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

- Physical state** : Liquid.
- Colour** : Clear.
- Odour** : Characteristic.
- Odour threshold** : Not applicable.
- pH** : 8 to 9
- Melting point/freezing point** : 0
- Boiling point, initial boiling point, and boiling range** : Lowest known value: 100°C (212°F) (water). Weighted average: 107.39°C (225.3°F)
- Flash point** : Not available.
- Evaporation rate** : Highest known value: 0.36 (water) Weighted average: 0.35 compared with butyl acetate
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : 0.6 - 12.6%
- Vapour pressure** : Highest known value: 2.3 kPa (17.5 mm Hg) (at 20°C) (water). Weighted average: 2.16 kPa (16.2 mm Hg) (at 20°C)
- Relative vapour density** : Highest known value: 7.5 (Air = 1) (propanoic acid, 2-methyl-, monoester with 2,2,4-trimethyl-1,3-pentanediol). Weighted average: 5.04 (Air = 1)

Section 9. Physical and chemical properties and safety characteristics

Density : 1.028 g/cm³

Solubility(ies) :

| Media | Result |
|------------|----------------|
| cold water | Easily soluble |
| hot water | Easily soluble |

Solubility in water : Not available.

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

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)

Particle characteristics

Median particle size : Not applicable.

No additional information.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|---------------------------------|---------|------------|----------|
| alcohols, c12-15, ethoxylated C(M)IT/MIT (3:1) zinc pyrithione | LD50 Oral | Rat | 2 g/kg | - |
| | LD50 Oral | Rat | 53 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | 0.14 mg/l | 4 hours |
| | LD50 Dermal | Rat | 2000 mg/kg | - |
| | LD50 Oral | Rat | 221 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|-----------------|------------------------------|-------|----------|-------------|
| zinc pyrithione | Eyes - Irritant | Mammal - species unspecified | - | - | - |

Sensitisation

| Product/ingredient name | Route of exposure | Species | Result |
|-------------------------|-------------------|------------------------------|-------------|
| C(M)IT/MIT (3:1) | skin | Mammal - species unspecified | Sensitising |

Section 11. Toxicological information

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|---------------|
| zinc pyrithione | Category 1 | - | - |

Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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

- General** : No known significant effects or critical hazards.
- 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.

Section 11. Toxicological information

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) |
|-------------------------------|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| alcohols, c12-15, ethoxylated | 2000 | N/A | N/A | N/A | N/A |
| C(M)IT/MIT (3:1) | 53 | 50 | N/A | 0.5 | N/A |
| zinc pyrithione | 221 | N/A | N/A | N/A | 0.14 |

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------------|--|--|----------|
| alcohols, c12-15, ethoxylated | Acute EC50 0.7 mg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 hours |
| | Acute EC50 0.39 mg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
| | Acute EC50 0.39 to 0.43 mg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
| | Acute EC50 1.3 to 1.4 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Chronic NOEC 1 mg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 hours |
| | Chronic NOEC 83 µg/l Fresh water | Daphnia - Daphnia magna - Neonate | 21 days |
| C(M)IT/MIT (3:1) | Acute EC50 0.048 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 0.0052 mg/l | Algae - Skeletonema costatum | 48 hours |
| | Acute EC50 0.1 mg/l | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 0.22 mg/l | Fish - Oncorhynchus mykiss | 96 hours |
| | Acute NOEC 0.00064 mg/l | Algae - Skeletonema costatum | 48 hours |
| | Chronic NOEC 0.0012 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Chronic NOEC 0.004 mg/l | Daphnia - Daphnia magna | 21 days |
| | Chronic NOEC 0.098 mg/l | Fish - Oncorhynchus mykiss | 28 days |
| zinc pyrithione | Acute EC50 0.067 mg/l | Algae | 72 hours |
| | Acute EC50 0.051 mg/l | Daphnia | 48 hours |
| | Acute LC50 0.0104 mg/l | Fish | 96 hours |
| | Chronic NOEC 2.7 ppb Marine water | Daphnia - Daphnia magna | 21 days |

Persistence/degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| C(M)IT/MIT (3:1) | - | - | Not readily |

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------------|--------------------|------|-----------|
| alcohols, c12-15, ethoxylated | 2.03 to 6.24 | 237 | low |
| C(M)IT/MIT (3:1) | - | 3.16 | low |
| zinc pyrithione | 0.9 | 11 | low |

Mobility in soil

Section 12. Ecological information

Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

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. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | China | UN | IMDG | IATA |
|-----------------------------------|----------------|----------------|----------------|----------------|
| UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| UN proper shipping name | - | - | - | - |
| Transport hazard class(es) | - | - | - | - |
| Packing group | - | - | - | - |
| Environmental hazards | No. | No. | No. | No. |

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.

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Incompatible materials : No specific data.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product:

Law of the People's Republic of China on the Prevention and Control of Occupational Diseases

Section 15. Regulatory information

Regulations on the Control over Safety of Dangerous Chemicals
 Measures for Environmental Management of New Chemical Substances
 Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes
 Safety regulations for the use of chemicals in the workplace
 General Rule for Classification and Hazard Communication of Chemicals
 Classification and code of dangerous goods

[List of Goods banned for Importing](#)

None of the components are listed.

[Drug Precursors Requiring an Import/Export License](#)

None of the components are listed.

[Inventory of Hazardous Chemicals](#)

None of the components are listed.

[List of Explosive Precursors](#)

| Ingredient name | CAS number | Status | Reference number |
|-----------------|------------|--------|------------------|
| sodium nitrate | 7631-99-4 | Listed | 2.1 |

[List of Goods banned for Exporting](#)

None of the components are listed.

[List of Toxic Chemicals Severely Restricted for Importing & Exporting by China](#)

None of the components are listed.

[Catalogue and classification of drug precursor chemicals](#)

None of the components are listed.

[Inventory of highly toxic articles](#)

None of the components are listed.

[Catalogue of Hazardous Chemicals of Priority Management](#)

None of the components are listed.

[Catalogue of Occupational Disease Hazard Factors - Dust](#)

None of the components are listed.

[Catalogue of Occupational Disease Hazard Factors - Chemical Factors](#)

None of the components are listed.

[International regulations](#)

[Chemical Weapon Convention List Schedules I, II & III Chemicals](#)

Not listed.

[Montreal Protocol](#)

Not listed.

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

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

Not listed.

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

Not listed.

Section 16. Other information

History

Date of printing : 17.01.2024

Date of issue/Date of revision : 17.01.2024

Date of previous issue : 15.01.2024

Version : 1.02

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 = Intermediate 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

Procedure used to derive the classification

| Classification | Justification |
|---|--------------------|
| SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3 | Calculation method |
| LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 | Calculation method |

References : Not available.

✔ Indicates information that has changed from previously issued version.

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.