



Safety Data Sheet

Page 1 / 5

Initial Preparation Date: 01 September, 2025 Revision Date: 31 July, 2026

1. Chemical and Company Identification

Product Name: PasteCool® Series 5 Silicate Radiative Cooling Topcoat

Intended Use: Widely applicable in building energy efficiency, data centers, grain storage, petrochemical storage tanks, power equipment, cold chain logistics, and new energy sectors where temperature-sensitivity or cooling/energy savings are required.

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2. Hazards Identification

Hazard Category: Not classified as a hazardous chemical.

Routes of Exposure: Ingestion, skin absorption.

Health Hazards: Not classified as a hazardous chemical.

Environmental Hazards: This product must not be poured into sewers or drains, nor disposed of in areas that may affect soil or groundwater.

Fire and Explosion Hazards: None.

3. Composition/Information on Ingredients

Product State: Liquid mixture

Chemical Name: PasteCool® Series 5 Silicate Radiative Cooling Topcoat

Main Components	Content (%)
Water	10~15
Water-based inorganic polymer emulsion	5~10
Inorganic Silicate Resin	10-20
Radiative cooling pigments	50~70

4. First Aid Measures

Skin Contact: Remove contaminated clothing and rinse thoroughly with soap



Safety Data Sheet

Page 2 / 5

Initial Preparation Date: 01 September, 2025 Revision Date: 31 July, 2026

and water.

Eye Contact: Immediately lift eyelids and rinse with plenty of water or saline for several minutes. Seek medical attention.

Ingestion: Do not induce vomiting. Rest and seek medical help if swallowed accidentally.

5. Firefighting Measures

Hazard Characteristics: No flash point.

Explosive Limits: Not applicable.

Fire and Explosion Hazards: None.

6. Accidental Release Measures

Emergency Procedures: Do not pour into drains or sewers. Clean contaminated areas with detergent, avoiding solvents. If the product contaminates lakes, rivers, or sewers, notify relevant authorities according to local regulations.

Conditions to Avoid: None.

Hazardous Decomposition Products: None.

7. Handling and Storage

Handling Precautions: Avoid contact with skin and eyes.

Storage Precautions: Store in a cool, dry, and well-ventilated place, away from direct sunlight and freezing temperatures. Keep containers sealed. The company is not responsible for products beyond their shelf life.

8. Exposure Controls/Personal Protection

Eye Protection: Wear safety goggles.

Body Protection: Wear appropriate protective clothing.

Hand Protection: Wear latex gloves.

Other Precautions: No smoking, eating, or drinking at the worksite. Shower and change clothes after work. Maintain personal hygiene.

9. Physical and Chemical Properties

Appearance: Liquid

Color: White

Odor: Not noticeable

pH: 8-10

Melting/Freezing Point (°C): No fixed freezing point. Emulsion particles may freeze at low temperatures; stir thoroughly after thawing to check paint performance.

Boiling Point (°C): No specific boiling point due to the mixture. Water, as the main solvent, starts boiling at around 100 °C.

Flash Point (°C): None (water-based system, non-flammable).

Ignition Temperature: No exact data; may burn under high-temperature flames.

Explosive Limits: No explosion hazard (water-based system, low volatile content, non-flammable).

Solubility: Water-soluble, can be mixed with water in any ratio. Pigments and fillers are evenly dispersed but not dissolved.

Relative Density: 1.80-2.10 kg/L

10. Stability and Reactivity

Stability: Stable

Incompatible Materials: Oxidizing agents, strong acids, strong bases.

Conditions to Avoid: Extreme temperatures.

Polymerization Hazard: Will not occur.

11. Toxicological Information

Acute Toxicity: No data available.

Skin Irritation: Mild irritation on rabbit skin; redness and slight swelling may occur.

Eye Irritation: Moderate irritation on rabbit eyes; may cause stinging, tearing, and conjunctival redness.

Chronic Toxicity: Long-term exposure may cause chronic irritation to the skin and respiratory tract, leading to dryness, cracking, and inflammation.

Mutagenicity: No evidence of mutagenicity.

Initial Preparation Date: 01 September, 2025 Revision Date: 31 July, 2026

Teratogenicity: No teratogenic effects found.

Carcinogenicity: No evidence of carcinogenicity under normal use conditions.

12. Ecological Information

Aquatic Toxicity: Some components may be toxic to aquatic life, such as certain additives and pigments, which may inhibit the growth and reproduction of fish and algae.

Terrestrial Toxicity: May affect soil microorganisms and plants. Large amounts of paint entering the soil may alter its physicochemical properties, affecting plant root growth.

Biodegradability: Some components, such as water and polymer emulsions, are biodegradable, but pigments and fillers are not easily biodegradable.

Non-Biodegradability: Some components may degrade through non-biological processes like photolysis and hydrolysis, but degradation is slow.

Bioaccumulation: No significant bioaccumulation observed.

Other Environmental Effects: Large emissions may cause water eutrophication (if additives contain nitrogen or phosphorus) and affect atmospheric chemistry, contributing to photochemical smog.

13. Disposal Considerations

Disposal Methods: Expired or waste products should be handled according to local environmental regulations. Generally, they should be disposed of by qualified hazardous waste treatment facilities using methods like incineration or landfill. Do not dispose of in the environment.

Contaminated Packaging: Empty containers should be cleaned and processed. If heavily contaminated, treat as hazardous waste.

14. Transport Information

UN Number: Not classified as hazardous; no UN number.

Transport Name: None.

Hazard Class: Non-hazardous.

Packaging: Sealed plastic or metal drums to prevent leakage during



Safety Data Sheet

Page 5 / 5

Initial Preparation Date: 01 September, 2025 Revision Date: 31 July, 2026

transport.

Transport Precautions: Avoid exposure to sunlight, rain, and high temperatures. Separate from oxidizing agents, acids, and bases.

15. Regulatory Information

Complies with Chinese regulations such as the Environmental Protection Law, Work Safety Law, and Hazardous Chemicals Safety Management Regulations.

16. Other Information

Source of Information and References: This SDS (Safety Data Sheet) was prepared by the Product Regulatory Services Department and Hazard Communication Department based on the company's internal standards. Entropy Lab Pte Ltd, hopes that every user or recipient of this (material) safety data sheet will carefully study it and, when necessary or appropriate, consult relevant experts to fully understand the data contained in this (material) safety data sheet and any hazards related to this product. All information provided here is true and reliable, and as of the effective date mentioned above, this information is accurate. However, we do not make any explicit or implied guarantees. Laws and regulations may change and may vary in different locations. It is the responsibility of the buyer/user to ensure that their actions comply with all federal, state, provincial, or local laws. The information provided here applies only to the product in its shipped state. Since the manufacturer cannot control the conditions under which the product is used, it is the responsibility of the buyer/user to ensure the safe use of the product. Due to the expansion of information sources, such as producer-specific (material) safety data sheets, we cannot and will not be responsible for (material) safety data sheets obtained from sources other than our company. If you have obtained a (material) safety data sheet from another source or are unsure whether it is the current version, please contact us to request the latest version.