

MATERIAL SAFETY DATA SHEET (MSDS)

1: Information of Manufacturer:

Company Name: THERMBLOCK JAPAN CO., LTD.
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2: Identification of Product:

Product Name: THERMBLOCK
 Main Usage: For exterior and interior paint
 HS Code: 3210.00
 Product Type: Water-based Emulsion Paint
 Product Code: 3190000
 UN Code: N/A

3: Identification of Materials:

This product does not fall under a notification requirement under the PRTR Regulations.

Name of Components	Amount Containe	CAS No.	Related Reg.
Acrylic resin	45.00%	55965-84-9	
Acrylic ball	5.00%	38742-70-0, 78-78-4	
Titanium Dioxide	16.00%	13463-67-7	GHS, ACGIH, NTP
Calcium carbonate	10.00%	1317-65-3	
Ammonia	0.20%	7664-41-7	PRTR
Additive	8.35%	25265-77-4, 9038-95-3	
Water	15.45%	7732-18-5	
Total	100.00%		

- GHS; Globally Harmonized System of Classification and Labelling of Chemicals
- ACGIH; American Conference of Government Industrial Hygienists
- NTP; National Toxicology Program
- PRTR; Pollutant Release and Transfer Register
- United Nations classification; N/A
- United Nations numbering; N/A

4: Classification of Hazards:

Label Classification	Reminder Term
 (Before drying)	WARNING

GHS Classification	Class	Hazard & Toxicity Information
Hazard Informtn		
Oral	-	Outside the classification
Skin	-	Outside the classification
Inhalation	-	Outside the scope of the classification
Fume	-	Outside the classification
Dust & Mist	-	Outside the classification
Skin Irritation/Corrosivity	-	Outside the classification
Serious Damage/Irritation to Eyes	2A	Serious eye irritation before drying
Respiratory Sensitivity	-	Outside the classification
Skin Sensitivity	-	Outside the classification
Reproductive Cell Mutagenenicity	-	Outside the classification
Cancer Causing Property	-	Outside the classification
Reproductive Hazard	-	Outside the classification
Particular Target Organ/Systemic Toxicity (Single Exposure)	-	Non-classifiable

Particular Target Organ/Systemic Toxicity (Repeated Exposure)	-	Non-classifiable
Respiratory Hazard	-	Outside the classification
Hazard in Aqueous Environments (Acute)	-	Outside the classification
Hazard in Aqueous Environments (Chronic)	-	Outside the classification

5: Emergency Treatments:

- Eye Contact: After washing eyes with sufficient clean normal water, receive treatment from an eye doctor immediately.
- Skin Contact: Remove the contaminated clothes and shoes, wipe off and wash skin thoroughly with warmwater and soap.
- Inhalation: If feeling nauseous from inhaling vapors, gas, etc., immediately move to a place with fresh air, relax and keep warm. Receive treatment from a physician promptly.
- Ingestion: Wash mouth thoroughly with water and see a physician immediately.

6: Measures for Fires:

Extinguishing Method: Although the product itself is inflammable, dry matter after water evaporation is flammable. However, the paint coating is so thin that the flammability depends mainly on the base coat materials. If burning, eradicate the source of burning and extinguish using an extinguishing agent.

Type of Extinguishing Agent	Water	Carbon Dioxide	Foam	Powder	Dry sands
Adequacy	○	○	○	○	○

7: Measures in Times of Leakage:

- Wear appropriate protective gears such as gloves, protective masks, aprons, goggles, etc.
- Collect the leakage into airtight container and move it to a safe place.
- Take measures according to the relevant laws and regulations for extraneous or wasted matters.
- Gather the leakage using a shovel, rag, etc. For large amount of runoff, prevent by surrounding it with earth fill.
- Exercise caution when cleaning with water as it may lead to environmental pollution by contaminating rivers, etc.

8: Cautions for Handling and Storage:

Precautions for safe handling:

- Handle in areas with good ventilation.
- Seal the container with lid tight after every use.
- Wear protective gears including protective eyewear and gloves in order to prevent contacts with eyes and skin.
- Install local exhaust ventilation or a wear protective mask with filters in case of work generating spray mist or vapors.
- While handling, do not eat or drink. Do not smoke.

Precautions for safe storage:

- Do not store with oxidizing agents.
- Store indoors to avoid freezing and direct sunlight.
- Seal the containers tight and store in well-ventilated space.
- Store distant from any source of fire and heat.
- Store under temperature between 0 degrees C (32 degrees F) and 40 degrees C (104 degrees F).

9: Exposure Control Measures:

Building:

- Establish a space to seal the source of steam generation or establish a local air exhaust system.
- In case of establishing a local air exhaust system, supply enough clean air to the work area compatible with the emission volume of the exhaust system in order to maintain proper operation.
- Establish shower and hand/face washing facility near the work place, and show the location clearly.
- Establish a ventilation system and prevent stagnant steam in the work area.

Protective Gear:

- Eye Protection: Wear protective eyewear.
- Respiratory Protection: In tightly sealed work area, wear appropriate protective masks such as air/oxygen respirators.
- Other Protection: Wear conductive shoes when conducting electrostatic coating work.

10: Physical and Chemical Quality of the Product:

Visual State	Liquid
Odor	Almost odorless
Melting Point	—
Boiling Point	100°C
Ignition Point	—
Explosion Limit (upper limit)	—
Steam Pressure	2200Pa
Octanol-Water Partition Coefficient	—
Oil absorption	N/A
Water insoluble matter	N/A
Lead	N/A

Color	White
PH	7.5
Freezing Point	—4°C
Flash Point	N/A
Specific Gravity	0.775
Explosion Limit (Lower limit)	—
Solubility	Easy
Kinematic Viscosity	30000 mm ² /s
Volatile matter	N/A
Residue on Sieve	N/A
Manganese chemicals	N/A

11: Stability and Reactive Characters:**Chemical Stability:**

- There is no specific hazardous reaction under normal temperatures & pressures and natural light.
- There is no specific hazardous substance by contact.
- Harmful gas may be generated through inflammation after drying.

12: Environmental Impact Information:

- Exercise caution when handling and disposal of the leakage as it may have an impact on the environment.
- Especially, take precautions lest the product or water used for cleaning should flow into the ground or river/drainage.
- Do not discharge the cleaning water used for cleaning containers and equipment directly to drainage.

13: Precautions for Disposal:

- Wastes such as paint, containers and incineration ash shall be disposed by outsourcing to an authorized industrial-waste disposal service provider
- Do not discharge waste water used for cleaning containers, equipment flow into the ground or drainage without conducting treatment.
- The wastes generated through drainage treatment, incineration, etc. should also be handled in accordance with the Waste Management and Public Cleansing Act and the related laws and regulations or outsourced.
- If incinerating waste paint, incinerate by small amounts by open type incinerators after absorbing in diatomaceous earth.

14: Precaution for Transport:

Common: Comply with what is indicated in the items of precautions for handling and storage.

Confirm the containers are not leaking, load the containers so that there will be no rolling, falling or damage, and ensure that prevention of cargo collapsing is provided.

Land Transport: Comply with what is stipulated concerning transport in case it is subject to the Fire Service Act, Industrial Safety & Health Act or Poisonous & Deleterious Substances Control Act.

Marine Transport: Comply with what is stipulated in the Ship Safety Act.

Air Transport: Comply with what is stipulated in the Civil Aeronautics Act.

United Nations Number: N/A

15: Major Applicable Japanese Laws:

- Industrial Safety & Health Act
- Fire Services Act: Non-hazardous Materials
- Waste Management & Public Cleansing Act: Specially controlled industrial wastes
- Pollutant Release & Transfer Register (PRTR) Law
- Water Pollution Control Act
- Sewerage Service Act