

OPTIMUS INC. SAFETY DATA SHEET

ISSUED DATE APRIL 4, 2017
REVISION DATE SEPTEMBER 6, 2023
 APRIL 15, 2026

MATERIAL SAFETY DATA SHEET (SDS) - FOR PAINT

(1) PRODUCT AND COMPANY INFORMATION

PRODUCT NAME	HYDRO THERMO
COMPANY NAME	Hoei Sangyou Co. Ltd.
ADDRESS	94, Ohnosiba-cho, Naka-ku, Sakai city, Osaka prefecture
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(2) SUMMARY OF HAZARD

(GHS CLASSIFICATION)

Physicochemical hazards

Flammable liquid

: Not classified.

Health hazards

Acute toxicity (oral)

: Not classified.

Acute toxicity (dermal)

: Not classified

Acute toxicity (inhalation: gas)

: Not classified

Acute toxicity (inhalation: vapor)

: Classification not possible

Acute toxicity (inhalation: dust/mist)

: Classification not possible

Skin corrosion / irritation

: Category 3

Serious eye damage / eye irritation

: Classification not possible

Skin sensitization

: Classification not possible

Respiratory sensitization

: Classification not possible

Germ cell mutagenicity

: Classification not possible

Carcinogenicity

: Category 2

Reproductive toxicity

: Classification not possible

Specific target organs /systemic toxicity (single exposure)

: Category 1

Specific target organs /systemic toxicity (repeated exposure)

: Category 1

Aspiration hazard category

: Classification not possible

Environmental hazard

Aquatic environment chronic hazard

: Classification not possible

Aquatic environment acute harmfulness

: Classification not possible

Hazardous to the ozone layer

: Classification not possible

[GHS LABEL ELEMENTS]

Signal ward : Dangerous



[Hazardous information]

: Causes mild skin irritation.

: Suspected of causing cancer.

: Causes damage to organs

: May cause damage to organ and through prolonged or repeated exposure.

(The heart, the liver, the respiratory system.)

INSTRUCTION

[Precaution]

- In the handling workspace, please provide a local exhaust system with no flames.
- Ventilation is good while handling, so as not to inhale steam, necessary.
- please respond accordingly to mask for organic gas or as mask for gas supply.



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- Protective eyeglasses, protective gloves, long sleeve work clothes so as not to touch the eyes and the skin please wear it.
- After handling, please wash your hands and gargle thoroughly.

[First aid measures]

- In case of fire, please use carbon dioxide gas, foam, or powdered fire extinguishers.
- In case of contact with eyes, wash with plenty of water for at least 15 minutes, promptly doctor's diagnosis please receive.
- If you feel bad by inhaling steam, gas etc., clean air please rest at the place and receive a doctor's diagnosis if necessary.
- If it adheres to the skin, wash it off with soapy water, it will cause pain or appearance when there is a change, please consult a doctor promptly.
- In case of accidental swallowing, get medical attention immediately.

[Storage]

- Keep locked and stored.

[Leakage]

- If spilling from the container wipe it off with sand, cloth, or the like, please collect it in a container filled with water.

[Disposal]

- Contents and containers, specialized waste received permission from the prefectural governor please consign it to a processing company.

(3) COMPOSITION / INFORMATION ON INGREDIENTS

Distinction between chemical substance and mixtures

: Mixture

Chemical name or general name

ingredients	CAS.No	Content(wt%)	Chemical Substances Control Law (Japan)	Ordinance on Industrial Safety and Health (Japan)
Acrylic silicon resin		20~25		
Titanium dioxide	13463-67-7	15~20	1-558	No.623
Dipropylene glycol n-butyl ether	34590-94-8	2~3	2-426	No.2189
Additives		<6		
Micro capsule		1~5		
Calcium carbonate	471-34-1	5~10	1-122	
Propylene glycol	57-55-6	1~2	2-234	No.1786
Amorphous silica	7631-86-9	<1.0		
Water		35~40		

(4) FIRST AID MEASURES

After inhalation

- Inhale steam, gas if you feel sick immediately transfer to a fresh place of freshness, endeavour to rest and keep warm, medical attention promptly.

After skin contact

- Remove adhered clothes and shoes, while flowing water or cool water while adhering parts wash.
- Rinse thoroughly with plenty of water and soap or skin

After eye contact

- Immediately remove all contaminated clothing.
- Immediately wash with plenty of clean running water for at least 15 minutes.
- Remove contact Lense when worn and can be removed easily.
- Wash thoroughly to the back of the eyelids.

After swallowing

- In case of accidental swallowing, wash the inside of the mouth with water, rest set up SDS immediately present and submit a doctor's diagnosis.



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Protection of first aiders

- Wear appropriate protective equipment (protective glasses, protective masks, gloves, etc) according to the situation.

(5) FIRE- FIGHTING MEASURES

Extinguishing media

- Water, carbon dioxide , foam , chemical powder , dry sand

Unsuitable extinguishing media

- Straight stream may spread a fire.

Specific fire extinguishing method: For initial fire, powder, carbon dioxide , etc. are used.

- In case of a large-scale fire, it is necessary to shut off the air using a foam etc. It is valid, in the case of a surrounding fire cool the surrounding equipment by spraying water.
- Transfer the movable container to a safe place in a prompt manner.
- Protection of firefighter: When extinguishing fire, wear air respirator, chemical protective clothing.

(6) ACCIDENTAL RELEASE MEASURES PERSONAL PRECAUTIONS

Protective equipment and emergency procedures.

- In the case of indoors, ventilate thoroughly until treatment is completed.
- Approach outside stakeholders by stretching a rope around the leaky place Ban.
- When handling the work, use protective equipment.
- (rubber gloves, protective eyeglasses, breathing protection, etc.) Do not wear and adhere to the skin or inhales gas / vapor.
- Work from the windward side and evacuate people leaning downwind.
- Prepare fire extinguishing equipment in case of ignition.
- In case of large amount, people are safely withdrawn.
- Environmental precautions: Be careful not to let spills enter the river etc
- In case of flowing into a river or the like, contact the fire department, river management department, waterworks bureau, public health centre, agricultural cooperative, fishery cooperative etc as necessary. : Appropriate measure such as reporting to the surrounding residents that a leak has occurred due to the occurrence of a bad smell etc.

Recovery

- In case of small amount, wipe with dry sand, sawdust, cloth etc, and collect it in a sealable container. Discard it later. : In case of a large amount , stop the flow path with blankets, sandbags, etc., and collect with a vacuum.

Containment and purification methods equipment: Stop leak if it is not dangerous.

- All equipment used when handling spills is grounded.

Measures to prevent secondary disasters: Remove nearby waste fire sources promptly, prepare fire extinguishers for ignition.

(7) HANDLING AND STORAGE

Precaution for handling: Provide ventilation and wear protecters.

- Avoid exposing by supplying an appropriate protection tool and ventilator.
- Keep container tightly closed.
- Wear protects equipment while the work, avoid eye, skin, and clothing contact.
- Wash hand, face and well gargle after handling.

Precaution for storage.

- Avoid freezing, direct sunlight, keep in a well-ventilated place. Avoid overturn, fall-down.

Precaution for painting.

- Provide local exhaust ventilation or general ventilation. Avoid prolonged or repeated exposure.



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(8) EXPOSURE CONTROLS AND PERSONAL PROTECTION

Adopted value, Control value : Not established (Titanium dioxide)
Japan Society for Occupational Health : Titanium dioxide
Inhalat dust 1 mg/m³ Total dust 4 mg/m³ (2009)

ACGIH : Titaniumdioxide TWA 10 mg/m³ (2009)
: Dipropyleneglycol TWA 100 PPM Skin
: Mono methyl ether STEL 150 PPM Skin

Equipment measures

- Use designated explosion-proof electricity, ventilation and lighting equipment.
- Take precautionary measures against electrostatic discharge.
- Ventilate for exhaust to keep airborne concentrations below exposure limits.: When mist occurs in the process at high temperature handling, control the air pollutant to the controlled concentration install a ventilator to keep it below
- Do not handle unless sealed equipment, equipment or local exhaust is used. To keep the air concentration below the recommended management concentration below, it is necessary to seal the process. use other equipment countermeasures.
- Store facial cleanser and safety shower in workspaces where this material is not stored and handled.

Protective equipment

Respiratory protection

- Wear respiratory protective equipment (gas mask for organic gas, airline mask Hand protection.
- Wear oil resistant protective gloves.

Eye protection

- Wear safety glasses (ordinary glasses type, ordinary glasses type with side plate ,goggle type). Skin and body protection
- Wear protective clothing (antistatic type) and protective shoes(antistatic type)

(9) PHYSICAL AND CHEMICAL PROPERTIES

SHAPE		LIQUID
COLOUR		WHITE
ODOR		SLIGHTLY ACRYLIC ODOR
PH VALUE		7-8
BOILING POINT		100C
MELTING POINT		NO DATA
FREEZING POINT		NO DATA
EXPLOSIVE RANGE		NO DATA
VAPOR PRESSURE		NO DATA
VAPOR DENSITY		NO DATA
DENSITY		1.1 +/- 0.1 (25C)
SOLUBILITY		WATER SOBTLE

(10) STABILITY AND REACTIVITY

STABILITY— Conditions to Avoid (temperature, light, etc.):		Does not react under normal conditions.
INCOMPATIBLE MATERIALS		No information available
HAZARDOUS DECOMPOSITION PRODUCTS		No information available
OTHER HAZARDOUS INFORMATION		Do not allow cloths, paper, brushes, rollers, dust, etc. containing this product to accumulate or remain rolled up.



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(11) TOXICOLOGICAL INFORMATION

Substance	Acute Toxicity — Oral	Acute Toxicity — Dermal	Acute Toxicity — Inhalation (Vapors)	Acute Toxicity — Inhalation (Dusts, Mists)
Titanium dioxide	LD50 > 5,000 mg/kg (estimated value)	LD50 > 5,000 mg/kg (estimated value)	—	LC50 > 50 mg/L
Dipropylene glycol monomethyl ether	LD50 = 5,230 mg/kg — Not classified	LD50 = 9,500 mg/kg (SIDS (2001)) — Not classified	LC50 = 661 ppm (SIDS (2001)) — Unable to classify	—

Substance	Skin Corrosion/Irritation	Serious Eye Damage/Eye Irritation	Respiratory Sensitization	Skin Sensitization
Titanium dioxide	Category 3	Unable to classify	Unable to classify	Not classified
Dipropylene glycol monomethyl ether	Not classified	Category 2B	Unable to classify	Not classified

Substance	Germ Cell Mutagenicity	Carcinogenicity	Reproductive Toxicity
Titanium dioxide	Unable to classify	Category 2	Unable to classify
Dipropylene glycol monomethyl ether	Unable to classify	Unable to classify	Unable to classify; No classification possible for effects on sexual function and fertility

Substance	Specific Target Organ Toxicity — Single Exposure	Specific Target Organ Toxicity — Repeated Exposure	Aspiration Hazard
Titanium dioxide	Category 1	Category 1	Unable to classify
Dipropylene glycol monomethyl ether	Category 3 — Respiratory tract irritation, based on the description of irritation to the nose, throat, and respiratory tract (ACGIH (2001))	Not classified	Unable to classify

(12) ECOLOGICAL INFORMATION

In the event of leakage or disposal:

There is a risk of adverse effects on the environment. Handle with care. In particular, take measures to prevent the product or wash water from flowing directly into the ground, rivers, or drainage channels.

Substance	Ecotoxicity	Persistence and degradability	Bioaccumulative potential	Mobility in soil
Titanium dioxide	No information available	No information available	No information available	No information available
Dipropylene glycol monomethyl ether	No data available	No data available	No data available	No data available

Substance	Hazardous to the aquatic environment — Short-term (acute)	Hazardous to the aquatic environment — Long-term (chronic)	Hazardous to the ozone layer
Titanium dioxide	Not classified	Category 4	Unable to classify
Dipropylene glycol monomethyl ether	Not classified because the acute toxicity test shows that the EC50 exceeds 100 mg/L	Not classified because the acute toxicity classification does not apply	Unable to classify

(13) DISPOSAL CONSIDERATIONS

Residual waste :

When incinerating, observe relevant laws and regulations. In the case of disposal, collection and transporters of industrial waste received permission of the prefectural governor contract with the disposal company, the waste disposal law (waste disposal and cleaning law) and comply with relevant laws and regulations and properly process it.

Contaminated containers and packaging :

In case of discarding empty contaminated containers / packages, after completely removing the contents the prefectural governor . We contracted with industrial waste collection / transportation companies and disposal companies that received permission of the Waste Disposal Act (Waste Disposal and Public Cleansing Law) and regulation and laws and regulations properly



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(14) TRANSPORT INFORMATION

International regulation		Not applicable
UN number		Not applicable
UN Class		Not applicable
Rail and road transportation information		Refer to applicable law and regulation.
Marine transportation information		Refer to applicable law and regulation.
Aviation transportation Information		Refer to applicable law and regulation.
Special safety measures		When transporting, make sure that the container does not leak, to prevent falling, or damage ensure prevention of loading and collapse of load. It is necessary to hold the yellow card when transporting. Do not transport with food and feed

(15) PRINCIPAL APPLICABLE LAWS AND REGULATIONS

Industrial Safety and Health Act (Japan):

Hazardous and Toxic Substances Subject to Labeling (Article 57, Paragraph 1 of the Industrial Safety and Health Act; Article 18-1 of the Enforcement Order; Appended Table 9)

Appended Table 2 of the Ordinance on Industrial Safety and Health

- Titanium Dioxide — No. 623
- 1-(2-Methoxy-2-methylethoxy)-2-propanol — No. 2189

(Contained in Dipropylene Glycol Monomethyl Ether)

- Propylene Glycol — No. 1786

Fire Service Act (Japan):

- Non-hazardous substance

Act on the Promotion of Chemical Management (PRTR Act):

- Not applicable

Poisonous and Deleterious Substances Control Act (Japan):

- Not applicable

(16) OTHER INFORMATION (CITED DOCUMENTS, ETC.) REFERENCES CITED

Raw material data sheet (Japan Manufacturing Paint Association) MSDS guide book (for paint) (Japan Manufacturing Paint Association) Hazardous substance data book (Maruzen publishing) GHS classification result database.(National Institute of Technology and Evaluation)

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