

Material Safety Data Sheet (SDS)
[For mixture (for paint)]

1. Product and company information

Product name : Optimus interior medical paint MP001(white)
Company name : Hoei sangyou Co.,Ltd.
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2. Summary of hazard

[GHS classification]

Hazard to health
Acute toxicity (oral) :Not classified
Acute toxicity (Dermal) :Not classified
Acute toxicity (inhalation:gas) :Classification not possible
Acute toxicity (inhalation:vapor) :Not classified
Acute toxicity (inhalation:dust/mist) :Not classified
Skin corrosion / irritation :Not classified
Serious eye damage / eye irritation :Category 2
Respiratory sensitization :Not classified
Skin sensitization :Not classified
Germ cell mutagenicity :Category 1B
Carcinogenicity :Category 2
Reproductive toxicity :Category 1B
Specific target organs toxicity(single exposure) :Category 1
Specific target organs toxicity(Repeated exposure) :Category 1
Absorption respiratory organs toxicity :Classification not possible

Enviromental hazard

Aquatic enviroment toxicity: acute :Not classified
Aquatic enviroment toxicity: chronic :Not classified
Hazardous to the Ozone Layer :Classification not possible

[GHS label elements]

Signal ward : Dangerous



[Hazardous information]

:Severe eye irritation.
:May cause genetic defects.
:Suspected of causing cancer.
:May damage fertility or the unborn child.
:May cause damage to organ. (Central nervous system, systemic toxicity, narcotic effects.)
:May cause damage to organ and through prolonged or repeated exposure.
(The liver, the blood 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.

: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, form or powdered fire extinguisher.

: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 adheresto the skin, wash it off with soapy water, it will cause pain or appearance when there is a chage, please consult a doctor promptly.

:In case of accidental swallowing, get medical attention immediately.

[Storage]

:Keep locked and stored.

[Leakage]

:If spilling from the containerswipe 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 perfectural 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

: Emulsion paint for interior

ingredients	CAS.No	Content (wt%)	Safety law
Acrylic silicon resin		15~20	
Dipropylene glycol monomethyl ether	34590-94-8	1~2	No. 601
Additives		<8	
Titanium dioxide ※	13463-67-7	20~25	No. 191
Ethanol	64-17-5	<1	No. 61
IPA	67-63-0	3~4	No. 494
Ag compound		<1	
Zinc compound	14807-96-6	<1	
Propylene glycol	57-55-6	<1	
Micro capsule		4~5	
Water		35~40	

※ Photocatalyst is included in titanium dioxide.

4. First aid measures

After eye contact

:Immediately remove all contaminatedclothing.

Immediately wash with plenty of clean running water for at least 15 minutes.

Remove contact lense when worm and can be removed easily.

Wash thoroughly to the back of the eyelids.

After swallowing

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

After skin contact

:Remove adhered clothesand shoes, while flowing water or cool water while adhering parts wash.

:Rinse thoroughly with plenty of water and soap or skin

After inhalation

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

Protection of first-aiders

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

5. Fire - fighting measures

Extinguishing media

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 inhale 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 center, 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 protectors.

Avoid exposing by supplying an appropriate protection tool and ventilator.

Keep container tightly closed.

Wear protection 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.

8. Exposure controls and personal protection

Adopted value ,Control value

name	Cotrol value	Adopted value	
Titanium dioxide	4 mg/m ³	10 mg/m ³	【ACGIH(TLV)】
IsoPropyl alcohol	200ppm	400ppm	【JSHO】
Ethanol	1000ppm	1000ppm	【ACGIH(TWA)】

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 processat 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.
In order 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, air line mask)

Hand protection.

- :Wear oil resistant protective gloves.

Eye protection

- :Wear safety glasses (ordinary glasses type,ordinary glasses type with side plate ,goggletype).

Skin and body protection

- :Wear protective clothing(antistatic type) and protective shoes(antistatic type)

9. Physical and chemical properties

Physical state, shape, color etc.	:White liquid
Odor	:Slightly acrylic odor
pH value	:7.0~8.0
Melting point • Freezing point	:0 °C (melting point)
Initial boiling point and boiling rang	:100 °C (boiling point)
Flash point	:No date
Explosive range	:No date
Vapor pressure	:No date
Vapor dencity	:No date
Density	:0.9~1.0 (25°C)
Solubility	:Water soluble
Octanol /water (log value)	:No date
Auto ignition temperature	:No date
Decomposition temperature	:No date
Odour threshold	:No date
Evapouration rate	:No date

10. Stability and Reactivity

Chemical stability :Stable in the air at the normal temperature.
Reactivity :Non-inflammable, CO, Nox gas occurs with combustion.

11. Toxicological information

Acute toxicity	Oral	Ethanol	:Rat	LD50 = 6200 mg / Kg
		IPA	:Rat	LD50 = 3437 mg / Kg
Acute toxicity	Skin	IPA	:Rabbit	LD50 = 4059 mg / Kg
Acute toxicity	Inhalation	Ethanol	:Rat	LC50 = 20000 ppm(10h)
		IPA	:Rat	LC50 = 29620 ppm(4h)
Germ cell mutagenicity		Ethanol	:Category 1B	
		IPA	:Negative in the micronucleus test	
Carcinogenicity		Ethanol	:A4 ACGIH(1996), group1(IARC)	
		IPA	:A4 ACGIH(2003), group3(IARC)	
Reproductive toxicity		Ethanol	:Category 1A	
		IPA	:Category 2	

12. Ecological information

Ecotoxicity	Ethanol	:Crustaceans (Daphia magna)	LC50=5463.9 mg/L(48hr)
	IPA	:Fishes (Himedaka)	LC50= >100mg/L (96hr)
Persistence/Degradable toxicity			:No information
Bioaccumulative potential			:No information
Mobility in soil			:No information

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.

14. Transport information

:Handle in accordance with the description 「HANDLE AND STRAGE」 .
:Check containers damage, leakage and tightness of taps.
Load containers carefully to avoid shock, falling, dropping and damage.
Perform prevention of collapse of cargo surely.

International regulation

UN number	: Not applicable
UN Class	: Not applicable

Rail and road transportation information

Marine transportation information :Refer to applicable law and regulation.
Aviation transportation information :Refer to applicable law and regulation.

15. Regulatory information

Industrial Safety and Health Act :Harmful substance to be notified of name etc.
(Article 57-2 of the law, appended table 9
of Article 18-2 of the enforcement ordinance)
No.191 Titanium dioxide
No.61 Ethanol
No.494 Isopropyl alcohol
No.601 1-(2 methoxy 2 methylethoxy)2 propanol
Pollutant Release and Transfer : Not applicable
Register Law (PRTR Law)
Fire Service Act : Not applicable
Poisonous and Deleterious : Not applicable
Substances Control Act

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)
Hadardous substance data book (Maruzen publishing)
GHS classification result database. (National Insutitute of Technology and
Evaluation)

This information herein is given in good faith in accordance with the data in a variety of technical publication.

It is the use's responsibility to determine the suitability of this information for the adoption of necessary safety precautions.

In addition, the information listed here is made based on the latest information by our investigation at the time of creation, but please understand that revision is possible by amendment of laws, regulations or the announcement of new toxicity test result.