

OPTIMUS INC. SAFETY DATA SHEET

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MATERIAL SAFETY DATA SHEET (SDS) - FOR PAINT

(1) PRODUCT AND COMPANY INFORMATION

PRODUCT NAME	OPTIMUS CMS PRIMER	For pre-painted galvanized steel sheet
COMPANY NAME	Hoei Sangyo Co. Ltd.,	
ADDRESS	94, Ohnosiba-cho, Naka-ku, Sakai city, Osaka prefecture	
DEPARTMENT IN CHARGE	Engineering Department	
PHONE NUMBER	+81-72-235-1131.	
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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)	: Not classified
Acute toxicity (inhalation: dust/mist)	: Classification not possible
Skin corrosion / irritation	: Not classified
Serious eye damage / eye irritation	: Category 2
Respiratory sensitization	: Not classified
Skin sensitization	: Not classified
Germ cell mutagenicity	: Category 1
Carcinogenicity	: Category 2
Reproductive toxicity	: Category 1
Specific target organs /systemic toxicity (single exposure)	: Classification not possible
Specific target organs /systemic toxicity (repeated exposure)	: Category 2
Aspiration hazard category	: Not classified

Environmental hazard

Aquatic environmental toxicity : acute	: Not classified
Aquatic environment toxicity : chronic	: Not classified
Hazardous to the ozone layer	: Classification not possible

[GHS LABEL ELEMENTS]

Signal ward : Dangerous



[Hazardous information]

: May cause genetic defects.
: Suspected of causing cancer.
: May damage fertility or the unborn child.
: May cause damage to organ. (The kidneys)
: May cause damage to organ and through prolonged or repeated exposure.
(The liver, the kidneys.)



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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 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 swipe 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

: Acrylate ester copolymer emulsion

ingredients	CAS.No	Content(wt%)	Ordinance on Industrial Safety and Health (Japan)
Acrylate ester copolymer	Registered	20~25	
Ethanol	64-17-5	2~3	No.205
Additives		5~10	
3chloro1,2propanediol	96-24-2	<0.5	No.544
1,3dichloro 2propanol	96-23-1	<0.5	No. 845
Water	7732-18-5	70~75	

(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 worm and can be removed easily.
- Wash thoroughly to the back of the eyelids.



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After swallowing

- In case of accidental wallowing, wash the inside of the mouth with water, rest set up SDS immediately present and submit a doctors diagnosis.

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.



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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

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.

Control value

:Not established

Adopted value

Japan Society For Occupational Health
Recommendation value (2005)

:Not established

ACGIH recommendation value (2005)

:TLV-TWA 1000ppm (Ethanol)

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		SLIGHTLY YELLOW MUDDY
ODOR		SLIGHTLY IRRITATING ODOR
PH VALUE		4-6
BOILING POINT		100C
MELTING POINT		0C
FREEZING POINT		0C
EXPLOSIVE RANGE		NO DATA
VAPOR PRESSURE		NO DATA
VAPOR DENSITY		NO DATA
DENSITY		1.0-1.1(20C)
SOLUBILITY		Soluble in water
N-OCTANOL/WATER(LOG VALUE)		NO DATA
AUTO IGNITION TEMPERATURE		NO DATA
DECOMPOSITION TEMPERATURE		NO DATA
FLAMMABILITY(SOLID,GAS)		NOT APPLICABLE
VISCOCITY		100-150 mPa s

(10) STABILITY AND REACTIVITY

CHEMICAL STABILITY		Stable in the air at the normal temperature
INCOMPATIBLE MATERIALS		No information
REACTIVITY		Non-inflammable, CO,NOx gas occurs with combustion



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CONDITIONS TO AVOID

HAZARDOUS DECOMPOSITION PRODUCTS

Low temperature (Below 5C), High temperature (Over 40C)

No information

(11) TOXICOLOGICAL INFORMATION

	Acute toxicity oral	dermal	vapour	dust, mist
Ethanol	LD50=7000~ 11000mg/kg (DIDS) Rat	LDL ₀ =20000mg/kg (SIDS) Rabbit	LC50=63000ppmV (4Hr) (DFGMAK)	
3-chloro 1,2 propane diol	LD50=26.55~300 mg/kg (IUCILID) Rat	LD50=1057mg/kg Rat LD50=800 μ L/kg (RTECS)	LC50=88~174ppm (4Hr) (IUCILID) Rat	
1,3Di chloro 2-pro papanol	LD50=110~122 mg/kg Rat (Initial Risk Assessment Report)	LD50=800mg/kg Rabbit (Initial Risk Assessment Report)	LC50=130~595ppm Rat (24Hr) (Initial Risk Assessment Report)	

	Skin corrosion/ irritation	Serious eye damage /irritation	Respiratory sensitization	Skin sensitization
Ethanol	Rabbit ,Skin irritation test (OECD. TG404, 4hr) No irritation	Rabbit Eye irritation test (OECD TG405) Moderate irritation	Patients with mild stable asthma, inhalation provocation test severe bronchoconstriction	Human, Allergic , contact dermatitis etc (DFGMAK)

	Skin corrosion/ irritation	Serious eye damage /irritation	Respiratory sensitization	Skin sensitization
3-chloro 1,2 propane diol	No data	Rabbit Eye irritation test Moderate irritation (HSDB, IUCILID)	No data	No data

	Skin corrosion/ irritation	Serious eye damage /irritation	Respiratory sensitization	Skin sensitization
1,3Di chloro 2-pro papanol	Rabbit ,Skin irritation test (24hr) Irritation (Initial Risk Assessment Report RTECS)	Rabbit, Eye irritation test Severe irritation (Initial Risk Assessment Report Eye irritation (ICSC)	No data	No data



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	Germ cell mutagenicity	Carcinogenicity	Reproductive toxicity
Ethanol	Rat, in vivo Chromosomal aberration test Micronucleus test (Drinking-water administration) Negative (SIDS, IARC)	(alcoholic drink IARC group 1 (Carcinogenic to human)	Drinking alcohol more than a certain level; Increased abortion and a risk of abortion (IARC)
3-chloro 1,2 propane diol	Mouse Dominant lethal test 8intraperitoneal administration/oral administration) Negative (IUCID)	IARC Group 2B Possibly carcinogenic to humans	Male, rat, Single-doseoral toxicity test50mg/kg A decrease in spermhead, swelling of the testis, etc (HSDB)
1,3Di chloro 2-pro papanol	Rat/Mouses in vivo Micronucleus test Negative (Environmental Risk Assessment, NTP)	IARC Group 2B Possibly carcinogenic to humans	Male, rat Single-dose subcutaneous toxicity test 43.7mg/kg A slight decrease in epididymal sperm count (Initial Risk Assessment Report)

	Specific target organ toxicity single exposure	Specific target organ toxicity repeated exposure	Aspiration hazard
Ethanol	Human inhalation toxicity test Stupor, somnolence mild paralysis Inhalation exposure:Upper airway irritation (ACGIH)	Human, Long-term large ingestion Hardous effects on almost all organs, Target: Liver (Fatty liver, hepatic necrosis (DFGMAK)	Classification not possible

	Specific target organ toxicity single exposure	Specific target organ toxicity repeated exposure	Aspiration hazard
3-chloro 1,2 propane diol	Rat, Oral toxicity test:100to200mg/kg Renal tubular dilation, necrosis or degeneration of renal tubular epithelium (HSDB)	Rat, 4week oral toxicity test 60mg/kg/day A decrease in hemoglobin concentration, or red blood cell volume or count, chronic progressive nephropathy (IUCID)	Classification not possible
1,3Di chloro 2-pro papanol	Human, Exposure during cleanup operation, General malaise, nausea vomiting acute liver injury, deaths (Initial Risk Assessment Report)	Male rat 14day oral toxicity test 20mg/kg/day :Spermatocoele in the efferent duct (Initial Risk assessment Report) May cause effect on the liver or kidney (ISCS)	Classification not possible



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(12) ECOLOGICAL INFORMATION

Avoid entering the river, ground, drainer or affecting to the environment.

Hazardous to the aquatic environment, short time(acute) : Not classified
Hazardous to the aquatic environment, long time(chronic) : Not classified

	Ecotoxicity	Persistence and degradability	Bioaccumulative potential	Mobility in soil
Ethanol	LC50>100mg/L (96hr) (SIDS) Fish-Fathead minow	Biodegradation test (2week) Readily biodegradable		No additional information available
3-chloro 1, 2 propane diol	LC50=2100mg/L (48hr) (IUCLED) Fish-Harlequin Rasbora	Biodegradation test (2weeks) Percentage degradation 68% (BOD) (HSDB)	BCF=0.2 (predicted value) (HSDB)	No additional information available
1, 3-Dichloro 2-propanol	LC50>100mg/L (96hr) (SIDS) Fish-Medaka (Environmental Risk Assessment, Initial Risk Assessment Report)	Biodegradation test (4weeks) Readily biodegradable (Environmental Risk Assessment, Initial Risk Assessment Report)	BCF=3.2 (predicted value) (Environmental Risk Assessment, Initial Risk Assessment Report)	No additional information available

(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

International regulation | Not applicable
UN number | Not applicable
UN Class | Not applicable

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) REGULATORY INFORMATION

Fire Service Act (Japan): Not applicable

Industrial Safety and Health Act (Japan):

Hazardous Substances Subject to Notification of Names, etc.

(Article 57-2 of the Act; Article 18-2, Appended Table 9 of the Order for Enforcement)

- Ethanol — Ordinance, Appended Table 2, No. 205
- 3-Chloro-1,2-propanediol — Ordinance, Appended Table 2, No. 544
- 1,3-Dichloro-2-propanol — Ordinance, Appended Table 2, No. 845



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Hazardous Substances Subject to Labeling of Names, etc.

(Article 57, Paragraph 1 of the Act; Article 18-1, Appended Table 9 of the Order for Enforcement)

- Ethanol — Ordinance, Appended Table 2, No. 205
- 3-Chloro-1,2-propanediol — Ordinance, Appended Table 2, No. 544

Act on the Promotion of Chemical Management (PRTR Act):Not applicable

Poisonous and Deleterious Substances Control Act (Japan):Not applicable

Marine Pollution Prevention Act (Japan):Hazardous Liquid Substances — Category Y

(Appended Table 1 of the Order for Enforcement)

3-Chloro-1,2-propanediol

Hazardous Liquid Substances — Category Z

(Appended Table 1 of the Order for Enforcement)

Ethanol

Air Pollution Control Act (Japan):

Volatile Organic Compounds (VOCs)

(Article 2, Paragraph 4; notification from the Ministry of the Environment to prefectural governments)

Ethanol

Volatile Organic Compounds (VOCs)

(Article 2, Paragraph 4; Survey Report on VOC Emissions for Fiscal Year 2002)

1,3-Dichloro-2-propanol

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

This document describes product safety information. In the case of please refer to technical documents, specification etc for various requirements on quality.

For details on protective equipment, please contact the Japan Safety Appliances Association.(TEL : 03-5804-3125)

References cited

:International Chemical Safety Cards.(ICSC)

Registry of Toxic Effects of Chemical Substances.(RTECS)

Working environment evaluation criteria.

Journal of the Japan Society for Occupational Health.

2001 TLVs and BELs (ACGIH)

The Code of Federal Regulations.(OSHA)

IARC Monographs on the Evaluation of Carcinogenic Risk to Humans.(IARC)

List of regulated substances.(Nippon Chemical Database)

Chemical database.(Nippon Chemical Database)

GHS classification result database.(National Institute of Technology and Evaluation)

CHEMGOLD2(ChemWatch)

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