



# SAFETY DATA SHEET

SDS Number: SDS/OTH-0020

Version No: 003

## 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Name: MICACEOUS IRON OXIDE  
Intended Use: Solvent-Based Decorative Paint  
Distributed by: Nippon Paint (S) Co. Pte Ltd  
No. 1 First Lok Yang Road  
Jurong Singapore 629728  
Emergency Phone Number: (65) 6 265 5355  
Fax Numbers: (65) 6 264 1603

## 2. HAZARDS IDENTIFICATION

### GHS Classification:

Physical Hazard  
Flammable Hazard Category 3

Health Hazard  
Acute Toxicity:  
- Oral Category 4  
Skin corrosion/irritation Category 2  
Serious eye damage/irritation Category 2  
Respiratory sensitization Category 1  
Skin sensitization Category 1  
Germ cell mutagenicity Category 1  
Carcinogenicity Category 1  
Asphyxiation hazard Category 1

Environmental Hazard  
Aquatic Acute Category 1  
Aquatic Chronic Category 1

### GHS Pictogram



Signal Word  
Danger

Hazard statements  
H226: Flammable liquid and vapour  
H302: Harmful if swallowed  
H304: May be fatal if swallowed and enters airways  
H315: Causes skin irritation  
H317: May cause an allergic skin reaction  
H319: Causes serious eye irritation  
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H340: May cause genetic defects

H350: May cause cancer  
H400: Very toxic to aquatic life  
H410: Very toxic to aquatic life with long lasting effects

### Precautionary statements

P201: Obtain special instructions before use  
P202: Do not handle until all safety precautions have been read and understood  
P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking  
P233: Keep container tightly closed  
P240: Ground/bond container and receiving equipment  
P241: Use explosion-proof electrical/ventilating/light/equipment  
P242: Use only non-sparking tools  
P243: Take precautionary measures against static discharge  
P261: Avoid breathing dust/fume/gas/mist/vapours/spray  
P264: Wash hands thoroughly after handling  
P270: Do not eat, drink or smoke when using this product  
P272: Contaminated work clothing should not be allowed out of the workplace  
P273: Avoid release to the environment  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P281: Use personal protective equipment as required  
P285: In case of inadequate ventilation wear respiratory protection

### Response

P321: Specific treatment (see Section 4 of SDS)  
P330: Rinse mouth  
P331: Do NOT induce vomiting  
P362: Take off contaminated clothing and wash before reuse  
P363: Wash contaminated clothing before reuse  
P391: Collect spillage  
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P302+352: IF ON SKIN: Wash with soap and water  
P304+341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing  
P308+313: IF exposed or concerned: Get medical advice/attention  
P332+313: If skin irritation occurs: Get medical advice/attention  
P333+313: If skin irritation or a rash occurs: Get medical advice/attention  
P337+313: If eye irritation persists: Get medical advice/attention  
P342+311: Call a POISON CENTER or doctor/physician  
P370+378: In case of fire: Use appropriate media for extinction  
P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

### Storage

P405: Store locked up  
P403+235: Store in a well ventilated place. Keep cool

### Disposal

P501: Dispose of contents/container to appropriate waste site or reclaimer in accordance with local or national regulations

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**3. COMPOSITION / INFORMATION ON INGREDIENTS**

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<b>Substances</b>	<b>CAS No.</b>	<b>%</b>
Mineral Spirit	8052-41-3	9-19
Synthetic Iron Oxide	1309-37-1	7-17
Aluminium Flake	7429-90-5	2-3
1,2,4-Trimethylbenzene	95-63-6	1-2
Substances determined to be non-hazardous	-	Balance
		<hr/> 100%

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**4. FIRST-AID MEASURES**

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**INHALATION**

- Move person to fresh air and call for medical assistance immediately.
- If not breathing, give artificial respiration, if breathing is difficult, give oxygen. Keep at rest.

**SKIN CONTACT**

- In case of contact, immediately flush skin with large amounts of water and soap while removing contaminated clothing and shoes.
- If irritation persists, get medical attention.

**EYE CONTACT**

- Immediately flush eyes with large amounts of water until irritation subsides.
- Remove contact lens
- Obtain medical attention, preferably by an ophthalmologist, immediately.

**INGESTION**

- DO NOT induce vomiting unless directed to do so by a medical personnel. Never give anything by mouth to an unconscious person. Keep at rest. Get medical attention immediately.

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**5. FIRE FIGHTING MEASURES**

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**SUITABLE FIRE EXTINGUISHING MEDIA**

- Alcohol-resistant foam, Carbon dioxide, or dry chemical type

**SPECIFIC HAZARDS ARISING FROM THE CHEMICAL**

- Combustion products may include and are not limited to: Carbon monoxide and Carbon dioxide.

**SPECIAL PROTECTIVE ACTIONS FOR FIRE FIGHTERS**

- Wear full protective clothing and NIOSH-approved self-contained breathing apparatus.
- Use water spray to cool fire-exposed surfaces and to protect personnel. If a leak or spill has not ignited, use water spray to disperse the vapours.
- If possible, isolate product from heat, electrical equipments, sparks and open flames.
- Avoid spraying water directly into storage containers.
- Closed containers may explode when exposed to extreme heat.
- Avoid spreading burning liquid with water, isolate liquid.
- Do not allow run-off from fire fighting to enter drains or watercourses.

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**6. ACCIDENTAL RELEASE MEASURES**

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**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURE**

- Wear appropriate protective equipment, e.g. respirators, eye protection, gloves and safety shoes.
- Avoid substance contact with eyes. Do not inhale vapours.
  - Ensure supply of fresh air in enclosed rooms.

**ENVIRONMENTAL PRECAUTIONS**

- Eliminate sources of ignition.
- Keep public away.
- Contain spilled liquid with sand or other non-combustible absorbent materials
- Wash area and prevent runoff into drains and sewerage system.
- Advise authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation.

**METHODS AND MATERIALS FOR CONTAINMENTS AND CLEANING UP**

- Clean up all spills immediately.
- Absorb spill with absorbent and inert material, then place in container.
- Disposal in accordance to local/national regulations.

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**7. HANDLING AND STORAGE**

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**PRECAUTIONS FOR SAFE HANDLING**

- Use appropriate personal protective equipment
- Keep out of reach of children.
- Handle containers with care. Open slowly in order to control possible pressure release.
- Do not pressurize containers.
- Do not ingest. Do not breathe in gas/fumes/vapour. Avoid contact with skin and eyes.
- For personal protection, see section 8.
- Use only in areas from which all naked lights and other sources of ignition have been excluded.
- Take precautionary measures against static discharge
- Protect from frost and extremes of temperature.

**CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**

- Keep containers tightly closed.
- Containers that are opened should be properly resealed and kept upright to prevent leakage.
- Store in cool, dry and well-ventilated place at temperature between 20°C to 40°C away from heat and sources of ignition.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**CONTROL PARAMETERS/OCCUPATIONAL LIMITS**

<b>Ingredient</b>	<b>ACGIH TLV-TWA</b>		<b>OSHA PEL-TWA</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>Ppm</b>	<b>mg/m<sup>3</sup></b>
Mineral Spirit	100	525	100	525
Synthetic Iron Oxide	-	-	-	-
Aluminium Flake	-	10	-	15
1,2,4-Trimethylbenzene	25	125	25	123

**APPROPRIATE ENGINEERING CONTROL MEASURES**

- Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.
- Ensure eyewash stations and safety showers are close to the workstation location.

**PERSONAL PROTECTION**

Respiratory Protection:	Use of NIOSH-approved respirators with organic vapour cartridges is recommended.
Hand Protection:	Use of solvent resistance type or chemical resistant type of protective gloves is recommended.
Eye Protection:	Use of safety glasses or goggles with side shields is recommended.
Skin / Body Protection:	Wear chemical resistant clothes and safety shoes when handling product.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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Appearance	:	Liquid
Odour	:	Aromatic hydrocarbon odour
Odour threshold	:	Not available
pH	:	Not available
Melting point/freezing point	:	Not available
Initial boiling point and boiling range	:	Between 136 and 190 °C
Flash point	:	42.45 °C
Evaporation rate	:	0.14 (n-butyl acetate = 1)
Flammability (solid, gas)	:	Not applicable
Lower flammability or explosive limit	:	0.7 % by vol
Upper flammability or explosive limit	:	8.0 % by vol
Vapour pressure	:	1.86 mmHg (1 kg at 20 °C)
Vapour density	:	1.01 (Water = 1)
Relative density	:	Not available
Solubility	:	Not Miscible in water
Partition coefficient	:	Not available
Auto-ignition temperature	:	> 200 °C
Decomposition temperature	:	Not available
Viscosity	:	78.0 - 82.0 kU

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**10. STABILITY AND REACTIVITY**

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**REACTIVITY**

- No dangerous reaction known under condition of normal use.

**CHEMICAL STABILITY**

- The product is stable under recommended storage and handling conditions. (see section 7)

**POSSIBILITY OF HAZARDOUS REACTION**

- Under normal conditions of storage and use, hazardous reaction will not occur.

**CONDITIONS TO AVOID**

- Keep away from oxidising agents, strongly alkaline and strongly acidic materials in order to avoid exothermic reactions. Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, drill, grind or expose containers to heat or sources of ignition.

**HAZARDOUS DECOMPOSITION PRODUCTS**

- When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke.

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**11. TOXICOLOGICAL INFORMATION**

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There is no data available on the product itself.

Toxicological information of ingredients:

**Acute oral toxicity**

Harmful if swallowed

Substances	Oral LD50 (Rat), mg/kg
Synthetic Iron Oxide	Data not available
Mineral Spirit	> 2000
Aluminium Flake	Data not available
1,2,4-Trimethylbenzene	> 5000

**Acute dermal/skin toxicity**

May be harmful if in contact with skin

**Substances**

Synthetic Iron Oxide

Mineral Spirit

Aluminium Flake

1,2,4-Trimethylbenzene

**Dermal LD50 (Rabbit), mg/kg**

Data not available

> 2000

Data not available

> 3160

**Acute inhalation toxicity**

Vapour concentrations above the recommended exposure levels may be irritating to the eyes and the respiratory tract, may cause headaches and dizziness, could be anesthetic and may have other central nervous system effects.

**Substances**

Synthetic Iron Oxide

Mineral Spirit

Aluminium Flake

1,2,4-Trimethylbenzene

**Inhalation Vapor LC50 (Rat), mg/L/4hr**

Data not available

Data not available

Data not available

Data not available

**Skin corrosion or irritation**

Causes skin irritation. Frequent or prolonged contact may dry the skin, leading to discomfort and dermatitis.

**Serious eye damage or irritation**

May be an eye irritant

**Respiratory or skin sensitisation**

Vapour concentrations above the recommended exposure levels may be irritating to the eyes and the respiratory tract

**Germ cell mutagenicity**

No information available on the product

**Carcinogenicity**

No information available on the product

**Reproductive toxicity**

No information available on the product

**Specific Target Organ Toxicity (STOT)-single exposure**

No information available on the product

**Specific Target Organ Toxicity (STOT)-repeated exposure**

No information available on the product

**Asphyxiation hazard**

May be harmful if swallowed and enters airways

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**12. ECOLOGICAL INFORMATION**

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**Toxicity**

Aquatic toxicity -No data available

**Persistence and degradability**

Biodegradation -No data available

**Bioaccumulative potential**

Has the potential to bioaccumulate

**Mobility in soil**

Floats on water. Adsorbs to soil and has low mobility

**Result of PBT and vPvB assessment**

No data available

**Other adverse effects**

There is no ecotoxicological test data available on the product itself.  
The product should not be allowed to enter drains or water courses

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**13. DISPOSAL CONSIDERATIONS**

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The product should not be allowed to enter drains and watercourses.

Preferred methods of waste disposal are incineration or biological treatment in federal/state approved facility. Empty containers should be recycled or disposed through an approved waste management facility or licensed contractor.

All federal, state and local environmental regulations shall be observed.

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**15. REGULATORY INFORMATION**

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Transport to be in accordance with ADR/RID for road/rail, IMDG for sea and IATA for Air.

**LAND TRANSPORT**

Classified as Dangerous Goods by the criteria of the European Agreement concerning the international carriage of Dangerous Goods (ADR) by Road & Regulations concerning the international carriage of Dangerous goods (RID) by Rail

UN Number: 1263  
Proper shipping name: PAINT (including paint, lacquer, enamel , stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)  
Class: Class 3  
Packaging Group: III

**SEA TRANSPORT**

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport of Sea

UN Number: 1263  
Proper shipping name: PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)  
Class: Class 3  
Packaging Group: III  
Marine Pollutant Yes

**SEA (ANNEX II OF MARPOL 73/78 AND THE IBC CODE)**

Not applicable

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### AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by Air

UN Number: 1263  
Proper shipping name: PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)  
Class: Class 3  
Packaging Group: III

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## 16. OTHER INFORMATION

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Applicable national regulations:

- Standards on Hazard communication for hazardous chemicals and dangerous goods
  - SS 586: Part 1: 2014-Transport and storage of dangerous goods
  - SS 586: Part 2: 2014-GHS of classification and labelling of chemicals
  - SS 586: Part 3: 2008(2014)-Preparation of safety data sheet
- MOM: Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations
  - This product is subject to SDS, labelling, PEL and other requirements in the Acts/Regulations.
- NEA: Environmental Protection and Management Act & Environmental Protection and Management (Hazardous Substances) Regulations
  - This product is not subject to control under this Acts/Regulations.
- SCDF: Fire Safety Act & Fire Safety (Petroleum and Flammable Materials) Regulations
  - This product is subject to the requirement of this Acts/Regulations.
- SPF: The Arms and Explosive Act, the Arms and Explosives (Explosives) Rules, and the Arms and Explosives (Explosive Precursors) Rules
  - This product is not subject to the requirement of this Acts/Regulations.

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## 16. OTHER INFORMATION

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Revision date: 17-Mar-2017

### Abbreviation

ACGIH American Conference of Governmental Industrial Hygienists

TLV Threshold limit value

TWA Time-Weighted Average

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

LD50 Lethal Dose

LC50 Median lethal concentration

IACR International Agency for Research in Cancer

### Disclaimer

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