

Safety Data Sheets

1. Identification

Product Name : 3D Model ink MG-100 White
Order No. : MG100-W-BS
General Use : Ink for ink jet printer
Product Description : UV Inkjet Ink
SDS Number : 037-U235142
Manufacture
Company Name : Mimaki Engineering Co., Ltd.
Address : 2182-3 Shigeno-otsu, Tomi-shi, Nagano 389-0512 JAPAN
Telephone No. : +81-268-64-2413
Importer / Distributor Established in USA
Company Name : MIMAKI USA, INC.
Address : 150 Satellite Boulevard NE , suite A, Suwanee, Georgia 30024,
U.S.A.
Telephone No. : +1-678-730-0170
Emergency Telephone No. : +1 866 928 0789 (within United States only, Toll free)
+1 215 207 0061

2. Hazards Identification

[GHS Classification]

Physical Hazards

Flammable Liquids : Not classified

Health Hazards

Skin Corrosion / Irritation : Category 2

Eye Damage / Irritation : Category 2A

Sensitization – Skin : Category 1

Toxic to Reproduction : Category 2

Specific Target Organ Toxicity : Category 3 (respiratory irritation)
(Repeated Exposure)

Environmental Hazards

Hazardous to the Aquatic : Category 1

Environment - Acute Hazard

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Hazardous to the Aquatic : Category 2

Environment - Long Term Hazard

The above list does not include category being non-classifiable or not-applicable.

[GHS Label Elements]

Symbol



Signal Word

Danger

Hazard Statements

- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation
- H361 Suspected of damaging fertility or the unborn child
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects

Precautionary Statements

[Prevention]

- P201 Obtain SDS (Safety Data Sheet) and printer's Operation manual before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing gas/mist.
- P264 Wash hands thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- 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.

[Response]

- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER/ doctor if you feel unwell.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash before reuse.
- P391 Collect spillage.

[Storage]

- P403+P233 Store in a well ventilated place. Keep container tightly closed.
- P405 Store locked up.

[Disposal]

- P501 Dispose of contents/container in accordance with
local/regional/national/international regulation (to be specified).

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3. Composition / Information on Ingredients

No	Chemical Name	Wt%	CAS No.
1	Isobornyl acrylate	25-70	5888-33-5
2	Tricyclodecane dimethanol diacrylate	30-60	42594-17-2
3	Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	0.5-1	75980-60-8
4	Camphene	<0.35	79-92-5
5	1,7,7Trimethyltricyclo[2. 2.1.02,6]heptane	<0.35	508-32-7
6	2-Propenoic acid	≤0.12	Trade Secret

4. First Aid Measures

Inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

Eye Contact : Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get immediate medical attention.

Skin Contact : Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. If skin irritation or rash occurs: Get medical advice/attention. Contaminated clothing should be removed and laundered before reuse.

Ingestion : If swallowed, get medical attention.

Most Important Symptoms/Effects

Acute : skin irritation, eye damage, allergic skin reaction

Delayed : allergic skin reaction, reproductive effects, immune system disorders

Indication of Immediate : Treat symptomatically and supportively.

Medical Attention and

Special Treatment

Needed, If Needed

5. Fire Fighting Measures

Flammable Properties : Flash point 104°C (as Isobornyl acrylate)

Extinguishing Media : Foam, carbon dioxide, dry chemical.

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Unsuitable Extinguishing : Solid water stream as it may scatter and spread fire

Media

Special Hazards Arising from the Chemical : Thermal decomposition can lead to release of irritating and toxic fumes

Advice for firefighters : Special protective equipment for fire fighters: Fire fighters should wear full protective clothing and self-contained breathing apparatus in positive pressure mode. Cool containers exposed to flame with water spray until well after fire is out.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures : Wear personal protective clothing and equipment, see Section 8. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Ventilate area of spill. Avoid release to the environment.

Environmental precautions : Prevent entry into waterways, sewers, basements or confined areas.

Methods and Materials for Containment and Cleaning Up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

Reference to other sections : See Section 1 for emergency contact information.

7. Handling and Storage

Precautions for Safe Handling : Avoid contact with skin and eyes. Avoid inhalation of vapors, spray, mist or gas. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information measures. Avoid release to the environment.

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Conditions for Safe Storage, including any Incompatibilities : Keep container tightly closed in a dry, cool and well-ventilated place. Protect from heat, direct sunlight. Keep away from oxidizing agents, reducing agents, acids, bases, free radical generators, inert gas, oxygen scavenger, peroxides. An air space is required above the liquid in all containers: avoid storage under an oxygen-free atmosphere.

8. Exposure Controls / Personal Protection

Exposure Limit Values : N/A

Exposure Controls

Occupational Exposure Controls

Appropriate Engineering Controls : Use process enclosures, local exhaust ventilation, or others engineering controls to keep airborne levels below recommend exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

Respiratory Protection : Suitable respirator. Be sure to use an approved/certified equipment or equivalent equipment. Wear appropriate respirator when ventilation is inadequate.



Hand Protection : Wear appropriate chemical resistant gloves.



Eye Protection : Wear splash resistant safety goggles with a faceshield.



Skin Protection : Wear appropriate long-sleeved clothing to minimize skin contact.



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9. Physical and Chemical Properties

Appearance	- Physical State	: Thick liquid-gel
	- Color	: Transparent-white
Odor		: Characteristic odor
pH		: Not available
Boiling Point / Boiling Range		: Not available
Melting Point / Melting Range		: Not available
Decomposition Temperature		: Not available
Flash Point		: 104°C (as Isobornyl acrylate)
Auto ignition temperature		: Not available
Flammability (Solid, Gas)		: Not available
Explosive Properties		: Not available
Oxidizing Properties		: Not available
Upper / Lower Flammability or Explosive Limits		: Not available
Vapor Pressure		
Specific Gravity		: Not available
Solubility		: Not available
Water Solubility		: Not available
Partition Coefficient (n-octanol / Water)		: Not available
Viscosity		: Not available
Vapor Density		: Not available
Evaporation Rate		: Not available
VOC		: Not available

10. Stability and Reactivity

Reactivity	: No reactivity hazard is expected.
Chemical Stability	: The product is stable under normal handling and storage conditions described in Section 7.
Possibility of Hazardous Reactions	: Hazardous reactions are not expected, under normal conditions of storage and use. Polymerization is exothermic and can degenerate into an uncontrolled reaction. Inhibitors have been added to stabilize isobornyl acrylate. Maintaining air in the storage containers is important to keep inhibitors active. Unless inhibited, hazardous

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polymerisation may occur. Tricyclodecane dimethanol diacrylate may polymerize.

Conditions to Avoid : Heat, direct sunlight, ultraviolet light.

Incompatible Materials : Oxidizing agents, reducing agents, acids, bases, free radical generators, inert gas, oxygen scavenger, peroxides.

Hazardous : Combustion: oxides of carbon, oxides of nitrogen, oxides of sulfur

Decomposition

11. Toxicological Information

Acute Toxicity : The component(s) of this material have been reviewed in various

Component Analysis - sources and the following selected endpoints are published:

LD50/LC50

Product/ingredient name	Test	Dose
Isobornyl acrylate	LD50(Oral), Rat	4,890 mg/kg
	LD50(Administration onto the skin), Rabbit	>5,000 mg/kg
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	LD50(Oral), Rat	>5,000 mg/kg

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation

Respiratory or skin sensitization : May cause an allergic skin reaction

Germ cell mutagenicity : Not available

Carcinogenicity : Not available

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (single exposure): : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Not available

Aspiration hazard

: Not available

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12. Ecological Information

Handling is noted because it might influence the environment when leaking and abandoning it.

Especially, note that the product doesn't flow directly to ground, the river, and the drain ditch.

Ecotoxicity : Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects

Component Analysis : The component(s) of this material have been reviewed in various

Aquatic Toxicity sources and the following selected endpoints are published:

Product/ingredient name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	LC50/72h, 1-10mg/l	LC50/96h, 1-10 mg/l	EC50/48h, 1-10mg/l
Isobornyl acrylate	ErC50/72 h (Pseudokirchneriella subcapitata) 1.98 mg/l NOECr/72 h (Pseudokirchneriella subcapitata) 0.405 mg/l	LC50/96h(Danio rerio (zebra fish)) 0.7mg/l	NOEC/21d (Daphnia magna(Water flea)) 0.092 mg/l

Persistence and Degradability : Isobornyl acrylate : Not readily biodegradable: 57% after 28 d.

Bioaccumulation : Isobornyl acrylate: Partition coefficient: n-octanol/water: log Kow: 4.52, Potentially bioaccumulable.

Mobility : Not available

Other Toxicity : Not available

13. Disposal Considerations

Disposal Methods : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Do not dump this product into sewers, on the ground or into any body of water.

Disposal of Contaminated : Empty containers should be taken for local recycling, recovery or waste disposal

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Packaging

14. Transport Information

Check a thing without a leak in a container.

Perform prevention of collapse of cargo surely.

US DOT Information

Shipping : Environmentally hazardous substance, liquid, n.o.s.
Name (Contains: ISOBORNYL ACRYLATE)
UN Number : UN3082
Hazardous Class or : 9
Division
Packing Group (PG) : III

ADR Information

Shipping : Environmentally hazardous substance, liquid, n.o.s.
Name (Contains: ISOBORNYL ACRYLATE)
UN Number : UN3082
Hazardous Class or : 9
Division
Packing Group (PG) : III

IATA Information

Shipping : Environmentally hazardous substance, liquid, n.o.s.
Name (Contains: ISOBORNYL ACRYLATE)
UN Number : UN3082
Hazardous Class or : 9
Division
Packing Group (PG) : III

IMDG Information

Shipping : Environmentally hazardous substance, liquid, n.o.s.
Name (Contains: ISOBORNYL ACRYLATE)
UN Number : UN3082
Hazardous Class or : 9
Division
Packing Group (PG) : III
Marine Pollutant : YES(Product)

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Transport to bulk : Not available
according to Annex II
of MARPOL 73/78 and
the IBC Code

15. Regulatory Information

TSCA inventory : The substances in this product are included on or exempted from the TSCA inventory.

California Proposition 65 : **WARNING**



This product can expose you to chemicals including Toluene(≤ 0.6%), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

16. Other Information

Key/Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; CAS - Chemical Abstracts Service; CLP - Classification, Labelling and Packaging; EEC - European Economic Community; EIN (EINECS) - European Inventory of Existing Commercial Chemical Substances; ELN (ELINCS) - European List of Notified Chemical Substances; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IMDG - International Maritime Dangerous Goods; IBC Code - International Bulk Chemical Code; Kow - Octanol/water partition coefficient; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NTP = National Toxicology Program; REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - European Rail Transport; STEL - Short-term Exposure Limit; TWA - Time Weighted Average; UEL - Upper Explosive Limit

Other Information

This information is furnished without warranty, express or implied, except that it is accurate to the best knowledge of Mimaki Engineering Corporation.

It relates only to the specific material designated herein, and does not relate to use in combination with any other material or process.



Product Name: 3D Model ink MG-100 White

SDS No. 037-U235142

First issue: 2020/04/07

Revised:

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