



SAFETY DATA SHEET

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PROVINICE
LIQUID

Printing date: June 30, 2022

SECTION 1. Identification of the substance or mixture and of the supplier

- 1.1 Product identifier
Trade Name:
PROVINICE "LIQUID"
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: Dental material
Uses advised against: No further data
- 1.3 Details of the supplier of the safety data sheet
Company/Undertaking identification
Manufacturer's Name: **SHOFU INC.**
Address: 11 Kamitakamatsu-cho, Fukuine, Higashiyama-ku, Kyoto 605-0983, JAPAN
Phone: +81-75-561-1112
Fax: +81-75-275-4795
Section in Charge: Quality Assurance Section
- 1.4 Emergency Telephone Number
+81-75-561-1112

SECTION 2. Hazards identification

- 2.1 GHS Classification
- | | |
|---|---|
| PHYSICAL HAZARDS | |
| FLAMMABLE LIQUIDS | Category 2 |
| HEALTH HAZARDS | |
| ACUTE TOXICITY-INHALATION (VAPOURS) | Category 4 |
| SKIN CORROSION/IRRITATION | Category 2 |
| EYE DAMAGE/IRRITATION | Category 2A |
| SENSITIZATION-RESPIRATORY | Category 1 |
| SENSITIZATION-SKIN | Category 1 |
| SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE) | Category 1 (respiratory organ)
Category 3 (narcotic effects) |
| SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE) | Category 1 (nervous system,
respiratory organ) |
| ENVIRONMENTAL HAZARD | |
| HAZARDOUS TO THE AQUATIC ENVIRONMENT-ACUTE HAZARD | Category 3 |

Other hazards than mentioned above are Not applicable or data available.

- 2.2 Label elements
SYMBOL:



GHS02



GHS07



GHS08



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HAZARD-DETERMINING COMPONENTS OF LABELLING

Methyl Methacrylate

Ethyl alcohol

SIGNAL WORD: Danger

HAZARD STATEMENTS

Highly flammable liquid and vapor

Causes skin irritation

May cause allergic skin reaction

Causes serious eye irritation

Harmful if inhaled

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause drowsiness or dizziness

Causes damage to organs (respiratory organ)

Causes damage to organs through prolonged or repeated exposure (nervous system, respiratory organ)

Harmful to aquatic life

PRECAUTIONARY STATEMENTS

[Prevention]

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

[Response]

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

If skin irritation or rash occurs: Get medical advice/attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Get medical advice/attention if you feel unwell.

[Storage]

Store in a cool and dark area.

[Disposal]

Dispose of contents and container in accordance with regulation.

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2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3. Composition/information on ingredients

3.1 Chemical characterization: Mixtures

3.2 Ingredients and composition:

Component	CAS-No	Weight %
Methyl Methacrylate	80-62-6	80-90
Ethyl alcohol	64-17-5	1-3
Others	—	

3.3 Additional information: For the wording of the listed risk phrases refer to section 2

SECTION 4. First-aid measures

4.1 Description of first aid measures

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present. and easy to do. If eye irritation persists, get medical advice/attention.

Skin contact: Wash immediately with soap and plenty of water. If on skin, skin irritation, get medical advice/attention.

Ingestion: Rinse mouth and seek medical advice if necessary.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If symptom concerning breath goes out, call a POISON CENTER or doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5. Fire-fighting measures

5.1 Extinguishing Media:

Foam, CO₂, Powder, Dry sand

5.2 Special hazards arising from the substance or mixture:

Easily flammable liquid in room temp.

Fire may produce irritating, corrosive and/or toxic gases.

5.3 Advice for firefighters:

Wear fire protective cloth and self-contained breathing apparatus, if necessary.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Avoid contact with eyes and skin.

6.2 Environmental Precautions:

Do not allow product to reach sewage system or water bodies.

Do not allow to enter the ground/soil.



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- 6.3 Methods and material for containment and cleaning Up:
Wipe up and discard in a stable container.
- 6.4 Reference to other section:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7. Handling and storage

- 7.1 Precautions for safe handling:
Handle in a well ventilated place.
Keep away from open flames, sparks and sources of heat. No smoking.
- 7.2 Conditions for safe storage, including any incompatibilities:
Store in a well ventilated dark area, keep away from ignition sources.
- 7.3 Specific end use(s):
No further relevant information available.

SECTION 8. Exposure controls/personal protection

- 8.1 Control parameters:
Exposure limits:
Methyl Methacrylate; ACGIH 50 ppm TWA
100 ppm STEL
Ethyl alcohol; ACGIH 1000 ppm TWA
- 8.2 Exposure controls:
Respiratory Protection:
Protective mask
- Skin Protection:
Hand Protection
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
· Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.



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· For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

Butyl rubber, BR

Nitrile rubber, NBR

Eye Protection: Safety goggles

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance/Odor/Colour:	Clear, colorless liquid with an aromatic odor.
Odour threshold	Not determined.
pH	Not determined.
Melting point/freezing point	Not determined.
Boiling Point:	≈ 100 °C
Flash point:	10.8 °C (closed)
Evaporation rate	Not determined.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative Density:	0.94 (water=1)
Solubility: water solubility	Insoluble
Partition coefficient: n-octanol/water	Not determined.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not applicable.
Oxidising properties	Not applicable.

9.2 Other information:

No further relevant information available.

SECTION 10. Stability and reactivity

10.1 Reactivity:

Very flammable liquid and the vapor mixed with air generate explosive gas. Polymerization reaction generate large quantity heat and quick reaction may cause explosion.

10.2 Chemical stability:

Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions:

No dangerous reactions known.

10.4 Condition to Avoid:

Sunlight, Heating, High temperature.

10.5 Incompatible materials:

Acid, Alkali, Oxidation-related material.

10.6 Hazardous Decomposition Products:

None under normal conditions of storage and use.

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SECTION 11. Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:	Acute Tox. 4; H332 Harmful if inhaled.
	Methyl Methacrylate;
	Oral rat LD50 7900 mg/kg
	Dermal rabbit LD50 > 5000 mg/kg
	Inhalation rat LC50 7093 ppm/4H(Vapor)
	Ethyl alcohol;
	Oral rat LD50 > 5000 mg/kg
	Inhalation rat LC50 20000 ppm/10H
Skin corrosion/irritation:	Skin Irrit. 2 ; H315 Causes skin irritation.
Eye damage/irritation:	Eye Irrit. 2A; H319 Causes serious eye irritation.
Sensitization to the respiratory tract:	
	Resp. Sens. 1; H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization:	Skin Sens. 1; H317 May cause an allergic skin reaction.
Germ cell mutagenicity/Genotoxicity:	
	Based on available data, the classification criteria are not met.
Carcinogenicity:	Methyl Methacrylate;
	Classified by IARC as group 3, ACGIH as group A4
	EPA class E
Reproductive toxicity:	Based on available data, the classification criteria are not met.
Effects on or via lactation:	Lack of data.
Specific target organ toxicity (single exposure):	
	STOT SE 1; H370 Causes damage to organs. (respiratory organ)
	STOT SE 3; H336 May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure):	
	STOT RE 1; H372 Causes damage to organs through prolonged or repeated exposure. (nervous system, respiratory organ)
Aspiration hazard:	Based on available data, the classification criteria are not met.
11.2 Information on other hazards:	
	No further relevant information available.

SECTION 12. Ecological information

12.1 Toxicity:	
	Methyl Methacrylate:
	Organism Toxicity: For Daphnia magna acute toxicity EC50/48hr 69mg/L..
	Persistence/degradability:
	Readily biodegradable. Degradability by BOD is 94.4%.
	Bioaccumulation: Bioaccumulation is not expected to be significant. Log Kow=1.38.
12.2 Persistence and degradability:	
	No further relevant information available.
12.3 Bioaccumulative potential:	
	No further relevant information available.
12.4 Mobility in soil:	
	No further relevant information available.

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12.5 Results of PBT and vPvB assessment:

Not applicable.

12.6 Other adverse effects:

No further relevant information available.

SECTION 13. Disposal considerations

13.1 Waste treatment methods:

Dispose of contents/container to in accordance with local/regional/national/international regulations.

SECTION 14. Transport information

- 14.1 UN number: 1247
- 14.2 UN proper shipping name: Methyl methacrylate monomer, stabilized
- 14.3 Transport hazard class(es): 3 Flammable liquids
- 14.4 Packing group: II
- 14.5 Environmental hazards: No further relevant information available.
- 14.6 Special precautions for user: Warning: Flammable liquids.
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

SECTION 15. Regulatory information

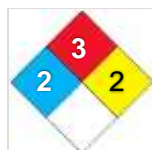
Follow all regulations in your country.

SECTION 16. Other information

This product is intended for use by dental professionals (instrument/material).

NFPA ratings (scale 0-4)

Methyl Methacrylate;



Health = 2
Fire = 3
Reactivity = 2

Ethanol;



Health = 2
Fire = 3
Reactivity = 0

HMIS-ratings (scale 0-4)

Methyl Methacrylate;

Health Hazard	2
Fire Hazard	3
Reactivity	2

Health = 2
Fire = 3
Reactivity = 2

Ethanol;

Health Hazard	2
Fire Hazard	3
Reactivity	0

Health = 2
Fire = 3
Reactivity = 0



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Relevant phrases:

- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H336 May cause drowsiness or dizziness.
- H370 Causes damage to organs. (respiratory organ)
- H372 Causes damage to organs through prolonged or repeated exposure. (nervous system, respiratory organ)
- H402 Harmful to aquatic life.

Abbreviations and acronyms:

- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative