

MATERIAL SAFETY DATA SHEET

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

1.1 Product Name:

PROVINCE "LIQUID"

1.2 Company /Undertaking identification

Manufacturer's Name: **SHOFU INC.**

Address: 11 Kamitakamatsu-cho, Fukunine, Higashiyama-ku, Kyoto 605-0983 ,JAPAN

Phone: +81- 75- 561- 1112

Fax: +81- 75- 561- 2273

Section in Charge: Quality Assurance Section

Date Prepared 2011.9.27

1.3 Emergency Telephone Number

+81- 75- 561- 1112

2. Hazards identification

GHS CLASSIFICATION

PHYSICAL HAZARDS	FLAMMABLE LIQUIDS	Category 2
	PYROPHORIC LIQUIDS	Not Classified
HEALTH HAZARDS	ACUTE TOXICITY- ORAL	Not Classified
	ACUTE TOXICITY- DERMAL	Not Classified
	ACUTE TOXICITY- INHALATION(VAPOURS)	Not Classified
	ACUTE TOXICITY- INHALATION(DUST)	Not Classified
	ACUTE TOXICITY- INHALATION(MST)	Not Classified
	SKIN CORROSION/IRRITATION	Category 2
	EYE DAMAGE/IRRITATION	Category 2A
	SENSITIZATION- RESPIRATORY	Category 1
	SENSITIZATION- SKIN	Category 1
	GERM CELL MUTAGENICITY	Category 1A
	CARCINOGENICITY	Not Classified
	TOXIC TO REPRODUCTION	Category 1A
	SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)	Category 3 (narcotic effects, respiratory tract irritation)
	SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE)	Category 1 (central nervous system, respiratory)
ENVIRONMENTAL HAZARD	HAZARDOUS TO THE AQUATIC ENVIRONMENT- ACUTE HAZARD	Category 2(liver)
	HAZARDOUS TO THE AQUATIC ENVIRONMENT- CHRONIC HAZARD	Category 3
		Not Classified

The thing without mention is out of a classification object. Or cannot classify it.

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LABEL ELEMENTS SYMBOL



SIGNAL WORD

Danger

HAZARD STATEMENTS

Highly flammable liquid and vapor
 Causes skin irritation
 May cause allergic skin reaction
 Causes serious eye irritation
 May cause allergy or asthma symptoms or breathing difficulties if inhaled
 May cause respiratory irritation
 May cause drowsiness and dizziness
 May cause genetic defects
 Suspected of damaging fertility or unborn child
 Causes damage to organs through prolonged or repeated exposure
 (central nervous system, respiratory)
 Causes damage to organs through prolonged or repeated exposure (liver)
 Harmful to aquatic life

PRECAUTIONARY STATEMENTS

[Prevention]

Obtain special instruction before use.
 Do not handle until all safety precautions have been read and understood.
 Wear protective gloves and eye/face protection.
 Do not breathe dust/fume/gas/mist/vapours/spray.
 Do not eat, drink or smoke when using this product.
 In case of inadequate ventilation wear respiratory protection.
 Keep away from ignition sources such as heat/sparks/open flames
 - No smoking
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing should not be allowed out of the workspace.
 Keep container tightly closed.
 Wash hands thoroughly after handling.
 Avoid release to the environment.

[Response]

If inhaled, 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 to doctor.
 If exposed or concerned, get medical advice/attention.
 If you feel unwell, get medical advice/attention.
 If on skin, wash with plenty of soap and water. If on skin, skin irritation, get medical advice/attention.
 If in eyes, rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do.
 If eye irritation persists, get medical advice/attention.

[Storage]

Store container tightly closed in cool/well-ventilated place.

[Disposal]

Dispose of contents and container in accordance with regulation.

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3.Composition/information on ingredients

	%	Hazardous
Methyl Methacrylate [Cas No.80- 62- 6]	> 95	F ,Xi
N,N- Dimethyl- P- Toluidine [Cas No.99- 97- 8]	< 2	
Ethanol [Cas No.64- 17- 5]	< 3	F
Others	< 11	

4.First- aid measures

- 4.1 Eye contact :* Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.
- 4.2 Skin contact :* Wash immediately with plenty of water and soap. If on skin, skin irritation, get medical advice/attention.
- 4.3 Ingestion :* Rinse mouth. Get medical advice/attention.
- 4.4 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 to doctor.

5.Fire- fighting measures

- 5.1 Suitable Extinguishing Media :* Use dry chemical, foam, carbon dioxide or dry sand to extinguish fire.
- 5.2 Extinguishing Media Should not be used :* Do not use water in a jet. Doing so may be in danger the spread fire.
- 5.3 Special Exposure Hazards Arising :* Nothing special item
- 5.4 Special Protective Equipment:* Wear fire protective cloth and self- contained breathing apparatus if necessary.

6.Accidental release measures

- 6.1 Personal Precautions:* Avoid eye and skin contact. See section 8
- 6.2 Environmental Precautions:* Send to approved treatment/disposal company or dispose according to local, state and federal regulations.
- 6.3 Methods for Cleaning Up:* Absorb with suitable absorbent (e.g. paper towel, cloth, dry sand, saw dust and vermiculite) and discard in a suitable container.

7.Handling and storage

- 7.1 Handling* Avoid inhalation of grindings and prolonged skin contact.
Handle in a well ventilated place. Keep away from sources of ignition- No smoking
Do not empty into drain.
- 7.2 Storage:* Store in a well ventilated dark area, keep away from ignition sources.
Take precautionary measures against static discharge.

8.Exposure controls/personal protection

- 8.1 Exposure limits:*
- Methyl Methacrylate:
- OSHA Permissible Exposure Limit (PEL): 100 ppm (TWA)
 - ACGIH Threshold Limit Value (TLV): 50 ppm (TWA), 100 ppm (STEL), Sensitizer,
 - A4 - Not Classifiable as a Human Carcinogen.

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- 8.2 Respiratory Protection:* Use local exhaust and protective gas mask for organic gas, if necessary.
8.3 Hand Protection: Latex or rubber gloves
8.4 Eye Protection: Safety goggles (May be required)
8.5 Skin Protection: Not required (Observe normal care when working with chemicals.)

9. Physical and chemical properties

- 9.1 Appearance/Odor/pH* Colorless liquid with perceptible sweet odor
9.2 Boiling Point/Boiling Range: $\approx 100^{\circ}\text{C}$
9.3 Melting Point/Melting Range: N/D
9.4 Flash point: 13.5°C (closed)
9.5 Auto flammability: $\approx 420^{\circ}\text{C}$
9.6 Explosive Properties: N/D
9.7 Oxidizing Properties: N/D
9.8 Vapour Pressure: N/D
9.9 Relative Density: ≈ 0.95 (water=1)
9.10 Solubility: water solubility Slightly soluble

10. Stability and reactivity

- 10.1 Stability:* A polymerization inhibitor has been added to the product to stabilize it under normal conditions of handling
10.2 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.
10.3 Condition to avoid Sunlight, Heating, High temperature
10.4 Materials to avoid Acid, Alkali, Oxidation- related material

11. Toxicological information

Methyl Methacrylate:

Acute Oral Toxicity :	LD50(Rat)	7900 mg/kg
Acute Dermal Toxicity :	LD50(Rabbit)	> 5000 mg/kg
Acute Inhalation Toxicity :	LC50(Rat)	7093 ppm/ 4H(Vapor)
Carcinogenicity :	Classified by IARC as group 3 ACGIH as group A4 EPA class E	

12. Ecological information

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

13. Disposal considerations

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

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14. Transport information

UN/ID no. 1247, (Haz Class 3 +Pack Group II) as methylmethacrylate monomer, inhibited

15. Regulatory information

Follow all regulations in your country.

16. Other information

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