MATERIAL SAFETY DATA SHEET

Number: D-0003-L (E)
Date prepared: May 29, 2001
Date revised: June 2, 2006

1. Chemical Product and Company Identification

Product code: -
Product name: Pattern Resin - Liquid
Manufacturer / Supplier:
GC Corporation, 76-1 Hasunuma-Cho, Itabashi-Ku, Tokyo, Japan
Postal code 174-8585, Phone 81-3-3965-1388

Australian supplier:
Henry Shein Halas Dental Co., Ltd.,
Sydney – Head Office
44 O'Dea Ave, Waterloo, NSW 2017
Emergency Phone (02) 9697-6288
Fax (02) 9697 6250

2. Composition / Information on Ingredients

(% chemical components by WT)

Methyl methacrylate (CAS 80-62-6)	60-70 %
Ethyl methacrylate (CAS 97-63-2)	20-30
Ethyleneglycol dimethacrylate (CAS 97-90-5)	< 1

(See section 8 for exposure guidelines)

3. Hazards Identification

Emergency Overview:
Clear colorless liquid with sweet/sharp odor. Highly flammable liquid and vapor, and irritating to eyes, respiratory system and skin. May cause allergic skin reaction.
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Potential Health Effects

Eye: Irritating eyes with redness and pain.
Skin: Irritating skin. Symptoms include redness, itching and pain. May cause allergic skin reactions
Inhalation: Inhalation of vapors irritates the respiratory tract. Symptoms from overexposure can include coughing, chest pain, headache, drowsiness, nausea, anorexia, irritability and narcosis.
Ingestion: May cause diarrhea, nausea and vomiting. Ingestion may be linked to liver and kidney damage.

4. First Aid Measures

Eyes:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention. .
Skin:
Flush skin with plenty of soap and water for at least 15 minutes. Get medical attention, if irritation develops.
Ingestion: Do not induce vomiting. Give plenty of water. Get medical attention if necessary.
Inhalation:
Supply fresh air and be sure get medial attention. In case of unconsciousness place patient stably in side position for transportation.

5. Fire Fighting Measures

Flammable Properties
Flash Point: 10℃
Flammable Limits:
Lower flammable limit: 1.7%
Upper flammable limit: 8.2%

Auto Ignition temperature: 435℃
Extinguishing Media: Chemical foam, carbon dioxide, and dry chemical
Fire Fighting Instructions:
Wear self-contained breathing apparatus in pressure-demand, and full protective gear. During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion.

6. Accidental Release Measures

Eliminate source of ignition. Wear protective equipment and keep unprotected persons away.
Do not allow product to reach sewage system or any watercourse. Prevent seepage into sewage system, workpits and cellars.
Inform respective authorities in case of seepage into watercourse or sewage system.
Measure for cleaning/collecting: Absorb with inert materials (dry, sand, earth, etc) and place in a chemical waste container. Ensure adequate ventilation.

7. Handling and Storage

Handling:
Keep Ignition sources away – Do not smoke.
Ensure good ventilation/exhaustion at workplace.
Storage:
Store in cool, dry conditions in well sealed receptacles. Keep receptacle tightly sealed.

8. Exposure Controls, Personal Protection

Respiratory Protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Skin Protection: Protective gloves
Eye Protection: Tightly sealed goggles
Exposure Guideline(s):
Methyl methacrylate (CAS 80-62-6)
OSHA (PEL): 100 ppm (TWA)
ACGIH (TLV): 50 ppm (TWA), 100 ppm(STEL)
Ethyl methacrylate (CAS 97-63-2)
OSHA (PEL): not listed
ACGIH (TLV): not listed
Ethylene glycol dimethacrylate (CAS 97-90-5): TLV is not established.
Engineering Controls: Ensure adequate and local ventilation..

9. Physical and Chemical Properties

Appearance: Clear colorless liquid
Odor: Sweet, sharp odor
Boiling Point: 100℃
Vapor Pressure (mm Hg): 40@25.5℃
Vapor Density (Air=1): 3.6
Solubility in Water: 1.5g in 100gm water
Specific Gravity: 0.9
Freezing/Melting Point: -48℃
pH: No data

Volatile: 100 @21℃

10. Stability and Reactivity

Stability: The product (inhibited) is stable at room temperature. Vapors are uninhibited and may form polymers in vents, causing stoppage.
Incompatibility: Polymerization catalysts (peroxides, persulfates), light, heat, nitric acid and strong oxidizers.
Hazardous Decomposition Products: Carbon dioxide and carbon monoxide.

11. Toxicological Information

Acute toxicity:
Methyl methacrylate (CAS 80-62-6)
LD50: 7872 mg/kg (oral rat)
LC50: 78,000 mg/m3/4-hours (inhalation rat)
Additional toxicological information:
Investigated as a tumorigen, mutagen, reproductive effector.
Carcinogenicity – IARC Group 3 carcinogen

12. Ecological Information

General notes: Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13. Disposal Considerations

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to the local official regulations.

14. Transport Information

IMO Regulations:
Proper shipping name: Methyl methacrylate monomer, stabilized solution
Hazardous class: 3
UN/NA: UN1247
Packing group: II
ICAO and IATA Regulations:
Proper shipping name: Methyl methacrylate monomer, stabilized solution
Hazardous class: 3
UN/NA: UN1247
Packing group: II

15. Regulatory Information

Chemical Inventory Status –
Methyl methacrylate (CAS 80-62-6)

TSCA	EC	Japan	Australia	Korea
Yes	Yes	Yes	Yes	Yes

Federal, State & International Regulations –
Methyl methacrylate (CAS 80-62-6)

-SARA 302-		-SARA 313-	
RQ	TPQ	List	Chemical Catg.
No	No	Yes	No

16. Other Information

The information herein is given in good faith, but no warranty expressed or implied, is made.