Material Safety Data Sheet MILLENIUM POUR ACRYLIC LIQUID

Section 1 – Identification of the Substance/Preparation and of the Company/Undertaking

Product Name: MILLENIUM POUR ACRYLIC LIQUID
Chemical Name: N/A

MSDS Initial Approval Date:	05/26/2006
MSDS Prepared by:	JRR

Family: Monomer

Product Use: Dental Monomer

Product #: --

Manufacturer: Mizzy Inc
616 Hollywood Av, Cherry Hill, NJ 08002
Emergency Phone Numbers: (800) 535 - 5053
Information Contacts: (856) 663 - 4700

Section 2 - Composition/Information on Ingredients

Chemical Identity	CAS Numbers	EINECS#	INCI Name	Exposure OSHA TWA/STEL	Limits ACGIH TWA/STEL	Carcinogen IARC/NTP/OSHA	%
Methyl Methacrylate	80-62-6	201-297-1	N/E	100ppm	100ppm	3/none/none	90-99
Ethylene Glycol Dimethacrylate Esters	97-90-5	202-617-2	Glycol HEMA-Methacrylate	N/E	N/E	Not Listed	1-7
N,N-Dimethyl-p-toluidine	99-97-8	202-805-4	Dimethyltolyamine	N/E	N/E	Not Listed	1-3
Inhibitor (MEHQ)	150-76-5	205-769-8	p-Hydroxyanisole	5 mg/m3	5 mg/m3	Not Listed	200ppm

N/E - None Established N/DA - No Data Available
N/R - Not Reviewed N/A - Not Applicable

Hazard Symbols: Xi F **Risk Phrases:** R11, R36/37/38, R43 **Safety Phrases:** S9, S16, S29, S33

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

This information is based on findings from related or similar materials.

- **Flammable liquid and vapor!** Hazardous polymerization may occur.
- May cause eye irritation.
- May cause skin irritation, corrosive, sensitizer.
- Avoid prolonged or repeated breathing of gases, vapors or mists.
- Please read entire MSDS for additional information.

Potential Health Effects, Signs and Symptoms of Exposure:

Primary Route of Entry	Inhalation, eyes & skin. **Target Organs:** Kidneys, central nervous system, liver.
Eye	Vapor concentration may cause irritation of eyes. Liquid contact with eyes can cause irritation and possible corneal damage.
Skin	May cause severe skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.
Ingestion	May cause central nervous system depression, kidney damage, and liver damage. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause allergic reaction. Exposure may cause headache, anorexia, and irritability.
Inhalation	High vapor concentrations may irritate the respiratory system. Prolonged exposure can lead to headaches, nausea, drowsiness and unconsciousness.
Sub-Chronic Effects	Prolonged or repeated skin contact may cause sensitization dermatitis and possible destruction and/or ulceration. May cause reproductive and fetal effects. Repeated exposure may cause tingling in the extremities and other nervous system abnormalities.

NOTE: Refer to Section 11, Toxicological Information for Details

Section 4 - First Aid Measures

First Aid for Eye	Flush with water for 15 minutes , including under eyelids. Get medical help if discomfort persists.
First Aid for Skin	Wash thoroughly with soap and water. Remove contaminated clothing. Get medical help if discomfort persists.

First Aid for Inhalation	Remove to fresh air. If having breathing difficulty, give oxygen. If breathing has stopped, give artificial respiration. Get medical help if discomfort persists.
First Aid for Ingestion	If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Seek medical attention if symptoms persist.

Section 5 - Fire Fighting Measures

Flash Point (°F/°C)	Flammable Limit (vol%)	Auto-ignition Temperature (vol%)
Tag Closed Cup: 68°F/20ºC	LEL: 2.0% UEL: 12.5%	790ºF/421ºC

Method:

Extinguishing Media:	Foam,carbon dioxide,dry chemical or carbon tetrachloride.
Fire Fighting Instructions:	Wear self-contained breathing apparatus and full protective gear.Water may be ineffective unless used as a fine spray or fog. Use water spray to cool the exposed containers of methyl methacrylate.
Unusual Hazards:	Vapors may travel to source ignition or excessive temperatures. Heat can induce polymerization with rapid release of energy.Closed containers may rupture explosively. Spontaneous polymerization may occur on prolonged aging. Explosive mixtures may occur at temperatures at or above the flashpoint.

Section 6 - Accidental Release Measures

Spill or Release Procedures -	Eliminate all sources of heat and ignition. Use absorbent material for spills and dike it, wash spill material into retaining containers. Place containers in a well ventilated area. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as sawdust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. EU Regulations require the consultation of Directive 98/24/EC. If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

Section 7 - Handling and Storage

Handling	Keep away from heat, sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. Ground all metal containers when transferring and use explosion-proof equipment. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling.
Storage	Store in a cool, dry area. Keep container closed when not in use. Store at ambient temperatures out of direct sunlight. Store in a well ventilated place. Store in accordance with National Fire Protection Association recommendations. Maintain air space inside storage containers . Inhibitor requires air (oxygen) contact to function. Check inhibitor levels after 3 months and return to original level.
Explosion Hazard	Avoid ignition sources or excessive temperatures. Heat can induce polymerization with rapid release of energy. Closed containers may rupture explosively. Spontaneous polymerization may occur with prolonged aging.

Section 8 - Exposure Controls / Personal Protective Equipment

Engineering Controls	Use process enclosures, local exhaust ventilation. or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation with a minimum capture velocity of 100 ft/min at the point of monomer release.Refer to "Industrial Ventilation: A Manual of Recommended Practice " published by the American Conference of Governmental Industrial Hygiene.

Personal Protective Equipment

General	To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product. Provide eye wash stations and safety showers. Wear impervious clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Nitrile rubber is better than PVC.
Eye/ Face Protection	Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact due to splashing or spraying material.

Skin Protection	Use impermeable clothing to prevent ANY contact with this product, such as gloves, apron, boots, or whole body suit. Neoprene and Nitrile rubber is better than PVC.
Respiratory Protection	A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exsposure limits. Protection provided by air purifying respirators is limited. Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepeice airline respirator in the positive pressure mode with emergency escape provisions. Follow OSHA repsirator regulations found in 29 CFR 1910.134 or Eurpean Standard EN 149.

Section 9 - Physical and Chemical Properties

Appearance	Odor & Odor Threshold	pH	Specific Gravity	Viscosity	% Volatile
Clear, colorless liquid	Characteristic strong, acrid odor	N/A	(H20=1): 0.94	N/DA, mPas @ 20ºC	W/W %: 99+

Boiling Point/ Freezing Point	Decomposition Temperature	Octanol/Water Partitioning Coefficient Log Po/w	Vapor Pressure:	Vapor Density	Evaporation Rate	Ignition	Solubility In Water (20°C)
214ºF/101ºC N/DA	N/A	N/DA	mm Hg : 29 @ 25ºC	(Air =1): 3.45	(Butyl Acetate = 1): 1.45	N/DA	Slightly soluble

Flash Point (°F/°C)	Flammable Limit (vol%)	Auto-ignition Temperature (vol%)
Tag Closed Cup: 68°F/20ºC	LEL: 2.0% UEL: 12.5%	790ºF/421ºC

Section 10 - Stability and Reactivity

Stability:
Stable under normal storage conditions.

Incompatibility (Materials to Avoid):
Substance is incompatible with polymerization catalysts (peroxides, persulfates), nitric acid, strong oxidizers, amines, halogens, bases, UV light, heat.

Hazardous Decomposition Products:
Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide

Hazardous Polymerization:
May occur

Conditions to Avoid:
Elevated temperatures, ignition sources, aging and contamination.

Section 11 - Toxicological Information

Acute Oral Toxicity	Acute Dermal Toxicity	Acute Inhalation Toxicity	Irritation - skin	Irritation - Eye
Oral(Rat) LD50: 7872 mg/kg	Dermal (Rabbit) LD50: 9400mg/kg	Inhalation (Rat) LC50 3750ppm	skin irritant	moderate eye irritant
Since this product contains a very low concentration of active components, the primary toxicological information is from the monomers. Further hazardous properties cannot be excluded. The product should be handled with care when dealing with chemicals.				

Sensitization	Mutagenicity	Sub-chronic Toxicity
skin sensitizer in animals	N/DA	N/DA

RTECS#: 80-62-6: OZ507500

Section 12 - Ecological Information

Ecotoxicological Information

Acute Toxicity To Fish	Acute Toxicity to Invertebrates	Acute Toxicity to Algae	Bioconcentration	Toxicity to Sewage Bacteria
96 hour LC50, fathead minnows: 150 ppm, bluegill sunfish; 232 ppm	N/DA	N/DA	N/DA	N/DA

Chemical Fate Information

Biodegradability	Partially biodegradable in water.
Chemical Oxygen Demand	(BOD 5 day): 0.14g/g - 0.90g/g ; Theoretical Oxygen Demand : 1.92g/g

To the best of our knowledge, the ecotoxocological and chemical fate properties have not been thoroughly investigated.
Do not allow to enter drinking water supplies, wastewater, or soil.

Section 13 - Disposable Considerations

Dispose of diking materials and absorbent in compliance with State, Local, and Federal regulations. Residual vapors may explode on ignition; do not cut, drill, or weld on or near the container. Mix with compatible chemical which is less flammable and incinerate.

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements. For EU Member States, please refer to any relevant Community provisions relating to waste. In their absence, it is useful to remind the user that national or regional provisions may be in force.

Section 14 - Transport Information

DOT (49 CFR 172)	
Proper Shipping Name:	Flammable liquids, n.o.s., (methyl methacrylate, ethylene glycol dimethacrylate), 3, UN1993, PGII
Identification Number:	UN1993
Marine Pollutant:	No
Special Provisions:	T8, T31
Emergency Response Guidebook (ERG) #:	**128**
IATA (DGR):	
Proper Shipping Name:	Flammable liquids, n.o.s., (methyl methacrylate, ethylene glycol dimethacrylate), 3, UN1993, PGII
Class or Division:	3
UN or ID Number:	UN1993
Packaging Instructions:	
Emergency Response Guidance (ICAO)#:	**3L**
IMO (IMDG):	
Proper Shipping Name:	Flammable liquids, n.o.s., (methyl methacrylate, ethylene glycol dimethacrylate), 3, UN1993, PGII
Class or Division:	3.2
UN or ID Number:	UN1993
Special Provisions & Stowage/Segregation:	None
Emergency Schedule (EmS)#:	
Other Information:	**Flash point = 20°C**

Section 15 - Regulatory Information

US Federal Regulations

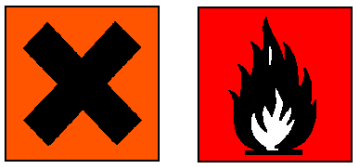
Clean Air Act: HAP/ODS	This product contains the following hazardous air pollutants (HAP's) as defined by the U. S. Clean Air Act: • Methyl Methacrylate CAS# 80-62-6 (HAP) This product does not contain any Class1 or Class 2 ODS.
Clean Water Act:	This product contains the following Hazardous Substances as defined by the CWA: • Methyl Methacrylate CAS# 80-62-6 This product does not contain substances that are a Priority Pollutant or Toxic Pollutant under the CWA.
FDA: Food Packaging Status	This product has not been cleared by the FDA for use in food packaging and/or other applications as an indirect food additive.
Occupational Safety and Health Act	This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard. Its hazards are: • Immediate (acute) health hazard • Fire hazard.
RCRA	This product is considered to be a hazardous waste under RCRA (40 CFR 261) RCRA Code: • Methyl Methacrylate, CAS# 80-62-6, RCRA Code: U162 • Characteristic of Ignitability, RCRA Code: D001
SARA Title III: Section 302 (TPQ)	This product contains no chemicals regulated under Sec. 302 as extremely hazardous substances that carry

	a TPQ.
SARA Title III: Section 302 (RQ)	This product contains chemicals regulated under Section 304 as extremely hazardous chemicals for emergency release notification ("CERCLA" List). • Methyl Methacrylate, CAS# 80-62-6, RQ (Lbs): 1000
SARA Title III: Section 311-312:	This product is considered hazardous under the OSHA Hazard Communication Standard and is regulated under Section 311-312 (40 CFR 370). Its hazards are: • Immediate (acute) health hazard • Fire hazard • Delayed (chronic) health hazard • Reactive
SARA Title III: Section 313:	This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: • Methyl Methacrylate, CAS# 80-62-6
TSCA Section 8(b): Inventory: TSCA Significant New Use Rule:	This product contains chemicals listed on the TSCA inventory or otherwise complies with TSCA premanufacture notification requirements. None of the chemicals in this material have a SNUR under TSCA.

State Regulations

CA Right-to-Know Law: California No Significant Risk Rule:	MEHQ CAS #150-76-5, MMA CAS #80-62-6 NONE
MA Right-to-Know Law:	MEHQ CAS #150-76-5, MMA CAS #80-62-6
NJ Right-to-Know Law:	MEHQ CAS #150-76-5, MMA CAS #80-62-6
PA Right-to-Know Law:	MEHQ CAS #150-76-5, MMA CAS #80-62-6
FL Right-to-Know Law:	MEHQ CAS #150-76-5, MMA CAS #80-62-6
MN Right-to-Know Law:	MEHQ CAS #150-76-5, MMA CAS #80-62-6

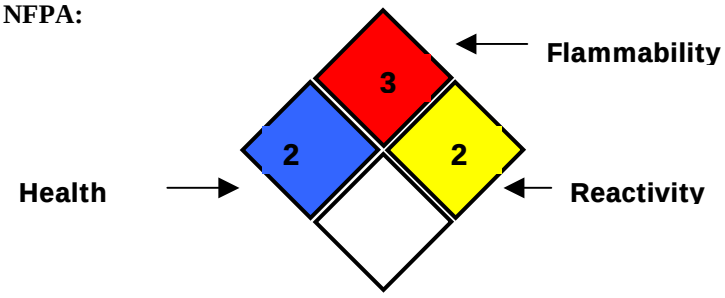
International Regulations

CDSL: Canadian Inventory (on Canadian Transitional List)	Methyl methacrylate, CAS# 80-62-6 is on the DSL List. WHMIS = B2, D2B. Ethylene glycol dimethacrylate, CAS# 97-90-5 is on the DSL List. WHMIS = n/da N,N-dimethyl-p-toluidine, CAS# 202-805-4 is on the DSL List, WHMIS: n/da MEHQ CAS #150-76-5 is on the DSL list. WHMIS = n/da
EINECS: European Inventory: 	• HAZARD SYMBOLS: **Xi, F:** *Irritant, Highly Flammable* • RISK PHRASES: **R11:** *highly flammable,* **R36/37/38:** *Irritating to eyes, respiratory system and skin,* **R43:** *May cause sensitization by skin contact* • SAFETY PHRASES: **S9:** *keep container in a well ventilated place,* **S16:** *keep away from sources of ignition- no smoking,* **S29:** *do not empty into drains,* **S33:** *take precautionary measures against static discharges.*

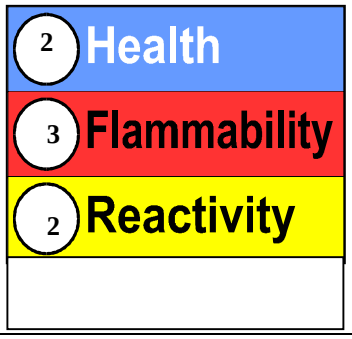
Section 16 - Other Information

Hazard Rating System (Pictograms)

NFPA:



HMIS:



Revised Sections since Last Version:	Section 1

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