

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Manufactured by: Millenia Productions, Inc. (3201 N Mead, Wichita, KS 67219)

Trade Name: Solar Mango Acrylic Liquid

Information: (316) 425-2500

Date Prepared: 12/15/00

Chemical Identity	CAS#	INCI Name	Exposure OSHA TWA/STEL	Limits ACGIH TWA/STEL	Carcinogen IARC/NTP/OSHA	%
Ethyl Methacrylate	97-63-2	Ethyl Methacrylate	100 ppm	100 ppm	Not Listed	>70
Ethylene Glycol						
Dimethacrylate Esters	97-90-5	N/E	N/E	N/E	Not Listed	<20
2-Hydroxyethyl Methacrylate	868-77-9	N/E	N/E	N/E	Not Listed	<20
Benzophenone	119-61-9	Benzophenone	N/E	N/E	Not Listed	<1
N, N-Dimethyl p-toluidine	99-97-8	N, N-Dimethyl- p-toluidine	N/E	N/E	Not Listed	<1

N/E - None Established

N/R - Not Reviewed

N/DA - No Data Available

N/A - Not Applicable

II. PHYSICAL DATA

Solubility in Water: 0.5 g/ 100g @20 C

Appearance and Odor: Blue-Violet Liquid with sharp ester-like odor

Specific Gravity (H₂O = 1): 0.918

Boiling Point: 243 deg F

pH: N/A

Viscosity: < 1 mPa s @ 20 C

% Volatile: W/W %: 99+

Decomposition Temperature: N/A

Octanol/Water Partitioning Coefficient: Log Po/w 1.25

Vapor Pressure: mm Hg: 0.69 kPa @ 38 C

Vapor Density: (Air =1): 3.9

Evaporation Rate: (Butyl Acetate = 1): 1.5

Ignition: N/A

III. FIRE AND EXPLOSION HAZARD DATA

Flashing Point: Tag Closed Cup: 68 F/ 20 C

Flammable Limit: LEL: 2%, UEL: 2.5%

Auto-Ignition: 392.8 C

Extinguishing Media: Foam, Carbon Dioxide, Dry Chemical or Carbon Tetrachloride

Fire Fighting Media: 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 methacrylate monomer.

Unusual Hazards: Vapors may travel to source of ignition and flash back. 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.

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.

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

IV. REACTIVITY DATA

Stable: Yes

Incompatibility (Material to Avoid): Reducing and oxidizing agents and UV light

Hazardous Decomposition: Oxides of carbon when burned

Hazardous Polymerization: May occur

Conditions to Avoid: Temperatures above 60 deg F, oxidizing or reducing agents, peroxides and amines, storage in absence of inhibitor, and inadvertent addition of catalyst.

V. HEALTH HAZARD DATA

Primary Route of Entry: Inhalation, skin, eyes

Eyes: Vapor concentrations may cause irritation of eyes. Liquid contact with eyes can cause irritation and possible corneal damage.

Skin: Liquid concentration may cause moderate skin irritation. Repeated or prolonged contact may cause allergic skin rashes, itching and swelling which becomes evident on re-exposure to this product.

Ingestion: Causes irritation, a burning sensation of mouth, throat, and respiratory tract and abdominal pain.

Inhalation: High vapor concentrations may irritate the respiratory system. Prolonged exposure can lead to headaches, nausea, drowsiness and unconsciousness.

Sub-Chronic Effects: Unlikely to present a cancer hazard in man.

NOTE: Refer to Section 11, Toxicological Information for Details

VI. EMERGENCY MEDICAL PROCEDURE

Eyes: Flush with running water for 15 minutes, including under eyelids. If irritation persists, seek medical attention.

Skin: Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. Seek medical attention if discomfort persists.

Ingestion: Rinse mouth out with water. Only induce vomiting if directed by a physician. Never give anything by mouth to an unconscious person. Seek prompt medical attention.

Inhalation: Remove to fresh air. If having breathing difficulty, give oxygen. If breathing has stopped, give artificial respiration. Seek medical attention if discomfort persists.

VII. 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 (29CFR 1910.132) be conducted before using the 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 to material.

Skin Protection: Use impermeable gloves to minimize skin contact.

Respiration Protection: Use self-contained breathing apparatus when needed. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Eye Wash Station and Safety Showers should be available.

VIII. SPILL, LEAK AND DISPOSAL PROCEDURES

Spill or Leak: Evacuate area and eliminate all possible sources of ignition. Use self-contained breathing apparatus and protective clothing. Dike and absorb spill with inert materials (sand, soda, ash, vermiculite, etc.) and transfer to proper containers for disposal, using non-sparking tools. Keep spills out of sewers and open bodies of water. Remove saturated clothing and wash affected skin areas with soap and water.

Spilled Area will be slippery: Use care to avoid falling.

IX. STORAGE AND HANDLING

Handling: Keep away from heat, sparks, flame and other sources of ignition. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor and 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 skin 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 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.

X. ECOTOXICOLOGICAL INFORMATION

Acute Toxicity to Fish: N/DA

Acute Toxicity to Invertebrates: N/DA

Acute Toxicity to Algae: N/DA

Bioconcentration: N/DA

Toxicity to Sewage Bacteria: N/DA

XI. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity: Oral (Rat) LD50: 13300 g/kg

Acute Dermal Toxicity: Dermal (Rabbit) LD50: >9100 mg/kg

Acute Inhalation Toxicity: Inhalation (Rabbit) LD50: 3800 ppm

Irritation - skin: N/DA

Irritation - eyes: N/DA

Sensitization: N/DA

Mutagenicity: Test positive as a mutagen on laboratory animals

Suv-Chronic Toxicity: N/DA

XII. CHEMICAL FATE INFORMATION

Biodegradability: N/DA

Chemical Oxygen Demand: N/DA

After the addition of excess inhibitor, incinerate the liquid and diking materials in accordance with federal, state and local regulations. Do not incinerate in closed containers. Biodegradation is also possible. **DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.** Exert extra care in igniting as this material is highly flammable.

DOT/UN Shipping Name: UN 1993; Flammable Liquid, n.o.s. Class 3, PG II RQ (lbs): 1000

XIII. FEDERAL REGULATIONS

Clean Air Act: HAP/ODS

This product contains the following hazardous air pollutants (HAP) and ODS's as defined by the US Clean Air Act: Benzophenone CAS# 119-61-9 (HAP)

Clean Water Act: Priority Pollutant

This product contains the following chemicals listed under the US Clean Water Act Priority Pollutant List: None

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 hazards; Fire hazard.

RCRA

This product is considered to be a hazardous waste under RCRA (40 CFR 261) RCRA Code: Ethyl methacrylate CAS # 97-63-2 U118.

SARA Title III: Section 302	This product contains no chemicals regulated under Sec. 302 as extremely hazardous substances.
SARA Title III: Section 304	This product contains chemical regulated under Sec. 304 as extremely hazardous chemicals for emergency release notification (“CERCLA” List). Ethyl Methacrylate CAS # 97-63-2 RQ (lbs) 1000.
SARA Title III: Section 311-312	This product is considered hazardous under the OSHA Hazard Communication Standard and is regulated under Sec. 311-312 (40 CFR 370). Its hazards are: Immediate (acute) health and fire hazard.
SARA Title III: Section 313	This product contains the following substances subject to the reporting requirement of Sec. 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: None.
TSCA Section 8(b): Inventory	This product contains chemicals listed on the TSCA inventory or otherwise complies with TSCA premanufacture notification requirements.

XIV. STATE REGULATIONS

CA Right-To-Know Law:	None
MA Right-To-Know Law:	Ethyl Methacrylate CAS #97-63-2
NJ Right-To-Know Law:	Ethyl Methacrylate CAS #97-63-2
PA Right-To-Know Law:	Ethyl Methacrylate CAS #97-63-2
FL Right-To-Know Law:	Ethyl Methacrylate CAS #97-63-2
MN Right-To-Know Law:	Benzophenone CAS #119-61-9

XVI. INTERNATIONAL REGULATIONS

CDSL: Canadian Inventory (On Canadian Transitional List)	Ethyl methacrylate: DSL regulatory status: Included, WHMIS: B2: flammable liquid D-28: Toxic N, N-dimethyl-p-toluidine: DSL regulatory status: Included, WHMIS: none 2-hydroxyethyl methacrylate: DSL regulatory status: Included, WHMIS: D2A Triethylene glycol dimethacrylate esters: DSL regulatory status: Included, WHMIS: D2B Benzophenone: DSL regulatory status: Included
EINECS: European Inventory	Ethyl methacrylate (202-597-5) N, N-Dimethyl-p-toluidine (202-805-4) 2-hydroxyethyl methacrylate (212-782-2) Triethylene glycol dimethacrylate esters (202-617-2) Benzophenone (204-337-6) Hazard Symbol (XIF T) R Values (R11, R23/24/25, R36/37/38, R43, R52/53) S Values (S9, S16, S28A, S29, S33, S45, S61)

XVI. OTHER

Millenia Productions believes that the information contained in this M.S.D.S. is correct as of this date. However, because the material may be used under conditions which **Millenia Productions** has no control of in ways we can not anticipate, we give no warranty expressed or implied, as to the accuracy of the information and assume no responsibility for any damage to person, property of business arising from such use. Moreover, it is the responsibility of the purchaser or user of this material to ensure that is properly and safety used.