



Safety Data Sheet

Issue Date November, 1 2015

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Version 1

1. IDENTIFICATION

Product Identifier

Product Name Miracryl Plus Denture Base Liquid

Other means of identification

Product Code # YL__00

UN/ID No UN1993

Synonyms Heat-Cure Cross Linked Acrylic Monomer

Recommended use of the chemical and restrictions on use

Recommended Use Acrylic denture base material.

Details of the supplier of the safety data sheet

Supplier Address

YATES MOTLOID
300 North Oakley Blvd
Chicago, IL 60612

Emergency Telephone Number

Company Phone Number 1-312-226-2473 (Business)
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Flammable Liquids	Category 2

Signal Word

Warning

Hazard Statements

Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
May cause respiratory irritation. May cause drowsiness or dizziness
EXTREMELY FLAMMABLE LIQUID AND VAPOR



Appearance Clear liquid

Physical State Liquid

Odor Strong Characteristic acid

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
If skin irritation or rash occurs: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

WHMIS Classification

B2 - Flammable liquid

Other Hazards

Harmful to aquatic life with long lasting effects
Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms Heat-Cure Cross Linked Acrylic Monomer

Chemical Name	CAS No	Weight-%
Methyl Methacrylate	80-62-6	>85
2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester	97-90-5	5-15
Cross Linking Agent (Polyfunctional acrylic monomer)	Proprietary	<1

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Skin Contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Get medical attention if symptoms occur.
Inhalation	Remove to fresh air. Keep patient warm and at rest. Seek immediate medical attention/advice.
Ingestion	If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give anything by mouth to an unconscious person. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed. Get medical attention immediately.

Most important symptoms and effects

Symptoms	Causes skin irritation. Causes severe eye irritation. May cause an allergic skin reaction. May cause dermatitis or irritation in some individuals upon prolonged contact. Inhalation may cause respiratory tract irritation. Inhalation may cause drowsiness or dizziness.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide (CO₂). Dry chemical. Foam.

Unsuitable Extinguishing Media Water may be ineffective, but can be used to protect firemen and cool containers.

Specific Hazards Arising from the Chemical

Product is readily ignitable. Highly flammable liquid and vapor. For bulk size >1L- High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat/pressure. Closed containers may rupture or explode during a runaway polymerization. Vapors are heavier than air and may travel along ground to ignition sources and flash back.

Hazardous Combustion Products Carbon oxides.

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Fight fire from a safe location. Heat/impurities may cause pressure to build and/or rupture closed containers, spreading fire, increasing risk of burns/injuries.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protection recommended in Section 8. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Environmental Precautions Prevent runoff from entering drains, sewers or streams.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Absorb spillage with non-combustible, absorbent material. Do not use combustible materials, such as saw dust. Use clean non-sparking tools to collect absorbed material. Maximize ventilation by opening doors and windows. Place all clean-up materials in an appropriate closed container in accordance with local, state, and federal regulations. Wash all affected areas with plenty of warm water and soap. Remove contaminated clothing and wash before reuse. In the event of an uncontrolled release of this material, the user should determine if the release is reportable under applicable laws and regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Wash face, hands, and any exposed skin thoroughly after handling. Wash thoroughly after handling before eating, drinking, smoking, or using toilet facilities. Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Vapor is heavier than air; beware of pits and confined spaces. Contaminated work clothing should not be allowed out of the workplace. Use only outdoors or in a well-ventilated area. Use non-sparking hand tools and explosion-proof electrical equipment. Take precautionary measures against static discharges. Keep containers closed when not in use. Ground/bond container and receiving equipment. Observe precautions found on the label.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Store locked up. Storage temperature should preferably not exceed 25°C/77°F. Methacrylate stored in bulk must be kept in contact with air (oxygen). Monomer vapors are uninhibited and may form polymers in vent or flame arresters, resulting in blockage of vents. Avoid excessive heat in storage to maintain product quality. Temperatures above 21°C (70°F), localized heat sources (example: drum or band heaters), oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing.

Packaging Materials Keep in original container.

Incompatible Materials Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers. Material has strong solvent properties and can soften paint and rubber.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl Methacrylate 80-62-6	STEL: 100 ppm TWA: 50 ppm	TWA: 100 ppm TWA: 410 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 410 mg/m ³	IDLH: 1000 ppm TWA: 100 ppm TWA: 410 mg/m ³

Appropriate engineering controls

Engineering Controls

Apply technical measures to comply with the occupational exposure limits. Use appropriate engineering controls such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where such systems are not effective, wear suitable personal protective equipment, which perform satisfactorily and meet OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of personal protective equipment. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Depending on the use of this product, safety glasses or goggles may be worn. If necessary, refer to U.S. OSHA 29CFR SS1910.133. Canadian standards, or the European Standard EN 166. Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.

Skin and Body Protection

Skin: Wear appropriate gloves to prevent skin exposure; chemical impervious gloves (eg: Nitrile or Neoprene). Refer to US OSHA 29 CFR 1910.138.

Body/Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respiratory Protection

Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator.

General Hygiene Considerations

Wash contaminated clothing before reuse. Wash face, hands and any exposed skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Strong Characteristic
Appearance	Clear liquid		acid
Color	Not determined	Odor Threshold	Not determined
Property	Values	Remarks • Method	
pH	Not determined		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	101 °C / 214 °F		
Flash Point	11.5 °C / 52.7 °F	Tag Closed Cup	
Evaporation Rate	3.1	(butyl acetate = 1)	
Flammability (Solid, Gas)	Liquid-not applicable		
Upper Flammability Limits	12.5% @ 421°C/790°F		
Lower Flammability Limit	2.12% @ 421°C/790°F		
Vapor Pressure	28 mmHg @ 20°C/68°F		
Vapor Density	3.5 @ 15.5°C/60°F	(Air=1)	
Specific Gravity	0.94	(1=Water)	
Water Solubility	1.6 wt% @ 20°C/68°F		

Solubility in other solvents	Not determined
Partition Coefficient	Not determined
Autoignition Temperature	Not determined
Decomposition Temperature	Not determined
Kinematic Viscosity	Like water
Dynamic Viscosity	Like water
Explosive Properties	Not determined
Oxidizing Properties	Not determined
Density	0.949 g/ml @ 15.5°C/60°F

10. STABILITY AND REACTIVITY

Reactivity

Reactive upon depletion of inhibitor.

Chemical Stability

Unstable upon depletion of inhibitor.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization may occur.

Conditions to Avoid

Temperatures above 21°C (70°F), localized heat sources (example: drum or band heaters), oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing.

Incompatible Materials

Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers. Material has strong solvent properties and can soften paint and rubber.

Hazardous Decomposition Products

Oxides of Carbon when burned.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Avoid contact with eyes. Causes serious eye irritation.
Skin Contact	Avoid contact with skin. Causes skin irritation. May cause an allergic skin reaction.
Inhalation	May cause respiratory irritation. May cause drowsiness or dizziness.
Ingestion	Ingestion may cause irritation of the mucous membranes, esophagus, and stomach.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl Methacrylate 80-62-6	= 7872 mg/kg (Rat)	> 5 g/kg (Rabbit)	= 4632 ppm (Rat) 4 h = 400 ppm (Rat) 1 h
2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester 97-90-5	= 3300 mg/kg (Rat)	-	-
Cross Linking Agent (Polyfunctional acrylic monomer)	> 90 mL/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested.

Chemical Name	ACGIH	IARC	NTP	OSHA
Methyl Methacrylate 80-62-6		Group 3		

Legend

IARC (International Agency for Research on Cancer)

Group 3 IARC components are "not classifiable as human carcinogens"

STOT - single exposure Causes damage to the following organs through prolonged or repeated exposure: nose. liver. kidneys.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Methyl Methacrylate 80-62-6	170: 96 h Pseudokirchneriella subcapitata mg/L EC50	243 - 275: 96 h Pimephales promelas mg/L LC50 flow- through 125.5 - 190.7: 96 h Pimephales promelas mg/L LC50 static 170 - 206: 96 h Lepomis macrochirus mg/L LC50 flow-through 153.9 - 341.8: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Oncorhynchus mykiss mg/L LC50 flow- through 79: 96 h Oncorhynchus mykiss mg/L LC50 static 326.4 - 426.9: 96 h Poecilia reticulata mg/L LC50 static		69: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not readily biodegradable Chemical Oxygen Demand (COD): 88% (28 days) Inherent Biodegradation: Dissolved Organic Carbon Removal (DOC Removal): >95% (28 days)

Bioaccumulation

Not determined

Mobility

Potential for mobility in soil is very high

Chemical Name	Partition Coefficient
Methyl Methacrylate 80-62-6	0.7

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methyl Methacrylate 80-62-6	U162	Included in waste stream: F039		U162

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Methyl Methacrylate 80-62-6	Toxic Ignitable

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN1993
Proper Shipping Name Flammable liquids, n.o.s. (Methyl methacrylate monomer, stabilized)
Hazard Class 3
Packing Group II
Reportable Quantity (RQ) 1000 lb

IATA

UN/ID No UN1993
Proper Shipping Name Flammable liquid, n.o.s. (Methyl methacrylate monomer, stabilized)
Hazard Class 3
Packing Group II

IMDG

UN/ID No UN1993
Proper Shipping Name Flammable liquid, n.o.s. (Methyl methacrylate monomer, stabilized)
Hazard Class 3
Packing Group II

15. REGULATORY INFORMATION

International Inventories

TSCA Listed
DSL Listed

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
- ENCS - Japan Existing and New Chemical Substances*
- IECSC - China Inventory of Existing Chemical Substances*
- KECL - Korean Existing and Evaluated Chemical Substances*
- PICCS - Philippines Inventory of Chemicals and Chemical Substances*

US Federal Regulations

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Methyl Methacrylate 80-62-6	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Methyl Methacrylate - 80-62-6	80-62-6	>85	1.0

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Methyl Methacrylate 80-62-6 (>85)	1000 lb			X

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Methyl Methacrylate 80-62-6	X	X	X

16. OTHER INFORMATION

<u>NEPA</u>	Health Hazards 2	Flammability 3	Instability 2	Special Hazards Not determined
<u>HMIS</u>	Health Hazards 2	Flammability 3	Physical Hazards 2	Personal Protection Gloves and safety glasses or chemical splash goggles

Issue Date	01-Mar-2013
Revision Date:	20-Jun-2013
Revision Note	New format

Disclaimer
 The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet