

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

074594420

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

074593356 074593844 074593869 074594313 074594321 074594412

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

074598058 070548214 074597944



# SAFETY DATA SHEET

Effective Date 11-May-2017

Version 4

## 1. IDENTIFICATION

### Product Identifier

**Product Name** JET LIQUID / ORTHO-JET LIQUID / ORTHO-JET BCA LIQUID

### Other means of identification

**SDS#** 028

**UN/ID No** UN1993

**Product Code** 0323, 0395, 0399, 1223, 1234, 1256, 1402X6, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1412, 1484, 1493 / 1303, 1304, 1306, 1307, 1308, 1309, 1323, 1334, 1356 / B1303, B1304, B1306, B1307, B1323, B1334, B1356, 1593, 2793, 2893

### Recommended use of the chemical and restrictions on use

**Recommended Use** Self-curing acrylic resin

### Details of the supplier of the safety data sheet

**Supplier Address** Lang Dental Mfg. Co., Inc.  
175 Messner Dr.  
Wheeling, IL 60090  
USA

### Emergency telephone number

**Company Phone Number** 847-215-6622  
**Emergency Telephone (INFOTRAC)** 352-323-3500 (International)  
800-535-5053 (North America)

### Authorized European Representative

MediMark® Europe SARL  
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## 2. HAZARDS IDENTIFICATION

### Classification

Flammable liquids	Category 2
Skin Corrosion / Irritation	Category 2
Skin Sensitization	Category 1
Specific Target Organ Toxicity - Single Exposure (Respiratory)	Category 3

**Signal word** Danger

**Hazard statements** H225 Highly flammable liquid and vapor.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H335 May cause respiratory irritation.



**Appearance** Clear or slightly tinted      **Physical state** Liquid      **Odor** Acrid

**Precautionary Statements – Prevention**

- P210 Keep away from heat/sparks/open flames/ hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 Wash hands thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary Statements – Response**

- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before use.
- P370+P378 In case of fire: Use CO<sub>2</sub>, for extinction.

**Precautionary Statements – Storage**

- P235 Keep cool.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.

**Precautionary Statements – Disposal**

- P501 Dispose of contents/container in accordance with local regulation.

**Hazardous component(s) for labeling** Contains methyl methacrylate

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS No	Weight - %	Trade Secret
Methyl Methacrylate	80-62-6	>95	*
N, N-Dimethyl-p-Toluidine	99-97-8	<2	*

\*Specific chemical weight has been withheld as a trade secret.

**4. FIRST AID MEASURES**

**First aid measures**

- Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician or poison control center immediately.
- Eye contact** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician immediately.

**Ingestion** Do NOT induce vomiting. Drink plenty of water or milk immediately. 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. Call a physician or poison control center immediately.

**Skin Contact** Wash off immediately with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs, get medical advice/attention.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Exposed individuals may experience eye tearing, redness and discomfort. Prolonged skin contact may cause skin irritation and redness. Prolonged exposure in poorly ventilated area may cause respiratory irritation.

## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable:** Chemical foam, carbon dioxide (CO<sub>2</sub>), dry chemical

**Unsuitable:** Water spray

**Specific hazards arising from the chemical**

For bulk quantities of >182 kgs (400lbs) – 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. Extremely flammable. Vapors of this product are heavier than air and may travel to a source of ignition and flash back to a leaking or open container. Vapor forms an explosive mixture with air.

**Hazardous Combustion Products**

Acrid smoke-fumes/carbon monoxide/carbon dioxide and perhaps other toxic vapors may be released during a fire involving this product.

**Protective equipment and precautions for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary. Do not enter area without proper protection. Fight fire from safe distance/protected location. Heat /impurities may increase temperature/build pressure/rupture closed containers, spreading fire, increasing risk of burns/injuries. Use water spray to cool unopened containers. Pressure relief system may plug with solids creating risk of overpressure.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Before cleaning any spill or leak, individuals must wear personal protective equipment as required. Remove any contaminated clothing and wash thoroughly before reuse.

**Environmental precautions** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent product from entering drains. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

**Methods and material for containment and clean-up**

**Method for containment** Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. DO NOT use combustible materials such as sawdust.

**Method for clean-up** Maximize ventilation and secure all sources of ignition. Place into appropriate closed container(s) for disposal in accordance with local, state and federal regulations. Wash all affected areas with plenty of warm water and soap.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### Advice on safe handling

Keep away from heat, sparks, and flame. Keep container closed after each use. Ground and bond all containers when transferring. Do NOT use localized heat source such as band heaters to heat/melt product. Do NOT steam. Hot boxes or hot rooms are recommended for heating the product, which can be set at a maximum temperature of 60°C/140°F. Avoid contact with skin, eyes and clothing. Use good personal hygiene and housekeeping. After use, wash hands and exposed skin with soap and water. Do not eat, drink, or smoke while handling product. Observe precautions found on the label.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition. Protect from direct sunlight. Keep container closed to prevent water absorption and contamination. Methacrylate stored in bulk quantities of >182 kgs (400lbs) must be kept in contact with air (oxygen). Keep at a temperature not exceeding 25°C. Vapors are uninhibited and may form polymers in vents or flame arresters, resulting in blockage of vents. Product residue may remain in empty containers.

#### Packaging materials

Keep in original container.

#### Incompatible materials

Strong oxidizing agents, strong reducing agents, free-radical generators, inert gases, oxygen scavengers.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure guidelines

Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required. The following information is given as general guidance.

Chemical Name	ACGIH TLV	OSHA PEL
Methyl Methacrylate 80-62-6	STEL: 100 ppm TWA: 50 ppm	TWA: 100 ppm TWA: 410 mg/m <sup>3</sup>

ACGIH = American Conference of Governmental Industrial Hygienists / OSHA = Occupational Safety and Health Administration  
PEL = Permissible Exposure Levels / STEL – Short Term Exposure Limit / TLV – Threshold Limit Value / TWA = Time Weighted Average

### Appropriate engineering controls

#### Engineering controls

For bulk quantities of >182 kgs (400lbs), use process enclosures, local exhaust ventilation or other engineering controls to control airborne exposure. Use local explosion-proof ventilation equipment.

### 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 US 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

If anticipated that prolonged and repeated skin contact will occur during use of this product, wear gloves for routine industrial use. If necessary, refer to US OSHA 29CFR SS1910.138 or the appropriate standards of Canada or the EC member states. Wear suitable protective clothing.

#### Respiratory protection

Wear suitable respiratory equipment if exposure to levels above the occupational exposure limit is likely. A suitable mask with filter type A may be appropriate. In the event of formation of particularly high levels of vapor, a self-contained breathing apparatus may be appropriate.

#### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. An eyewash station is recommended. Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Wash hands thoroughly before eating, drinking, or smoking.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid	<b>Odor</b>	Acrid
<b>Appearance</b>	Liquid	<b>Odor threshold</b>	Not determined
<b>Color</b>	Clear or slightly tinted		

<u>Property</u>	<u>Values</u>	<u>Remarks / Method</u>
pH	Not determined	
<b>Melting point / Freezing point</b>	-48°C / -54.4° F	
<b>Boiling point / boiling range</b>	101°C / 214° F	
<b>Flash point</b>	12°C / 54°F	
<b>Evaporation rate</b>	Not determined	
<b>Flammability (solid, gas)</b>	n/a (liquid)	
<b>Flammability limits in air</b>		
<b>Upper flammability limit</b>	Not applicable	
<b>Lower flammability limit</b>	Not applicable	
<b>Vapor pressure</b>	Not applicable	
<b>Vapor density</b>	Not applicable	
<b>Specific gravity</b>	0.94	Water = 1
<b>Water solubility</b>	Not applicable	
<b>Solubility in other solvents</b>	Not determined	
<b>Partition coefficient</b>	Not determined	
<b>Autoignition temperature</b>	421°C / 790°F	
<b>Decomposition temperature</b>	Not determined	
<b>Kinematic viscosity</b>	Not determined	
<b>Dynamic viscosity</b>	Not applicable	
<b>Explosive properties</b>	Not determined	
<b>Oxidizing properties</b>	Not determined	

### Other information

<b>Density</b>	0.94 g/mL
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## 10. STABILITY AND REACTIVITY

**Reactivity** Unstable/Reactive upon depletion of inhibitor.

**Chemical stability** Stable under recommended storage conditions.

**Possibility of hazardous reactions** None under normal processing

**Hazardous polymerization** Hazardous polymerization may occur upon depletion of inhibitor. May cause heat and pressure build-up in closed containers.

### Conditions to avoid

For bulk quantities of >182 kgs (400lbs) – Prolonged temperatures above 25°C (77°F), localized heat sources (e.g. drum or band heaters), oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing

### Incompatible materials

Strong oxidizing agents, strong reducing agents, free-radical initiators, inert gases, oxygen scavengers.  
Material has strong solvent properties and can soften paint and rubber.

**Hazardous decomposition products** Acrid smoke-fumes/ carbon monoxide/carbon dioxide and perhaps other toxic vapors may be released during a fire involving this product.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposures

#### Product information

<b>Inhalation</b>	Harmful if inhaled.
<b>Eye contact</b>	Causes severe eye irritation.
<b>Skin contact</b>	Causes skin irritation.
<b>Ingestion</b>	May be harmful if swallowed.

#### Component information

Chemical Name	ORAL LD <sub>50</sub>	DERMAL LD <sub>50</sub>	INHALATION TC <sub>Lo</sub>
Methyl Methacrylate 80-62-6	>7900 mg/kg (rat)	>35,500 mg/kg (rabbit)	7094 ppm/ 4H (rat) 125 ppm 60 mg/ m <sup>3</sup> (human)
N, N-Dimethyl-p-Toluidine 99-97-8	1650 mg/kg (rat)	>2000 mg/kg (rat)	498 mL/m <sup>3</sup> (rat)

### Information on physical, chemical and toxicological effects

**Symptoms** Exposed individuals may experience eye tearing, redness and discomfort. Prolonged skin contact may cause skin irritation and redness. Prolonged exposure in poorly ventilated area may cause respiratory irritation.

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

<b>Sensitization</b>	May cause allergic skin reaction.
<b>Carcinogenicity</b>	This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
<b>STOT – single exposure</b>	May cause respiratory irritation.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

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; 326.4-426.9 96 h Poecilia reticulata mg/L LC50 static; >79: 96 h Oncorhynchus mykiss mg/L LC50 flow-through; >79: 96 h Oncorhynchus mykiss mg/L LC50 static	-	69: 48 h Daphnia magna mg/L EC50
N,N-Dimethyl-p-Toluidine 99-97-8	-	46-52: 96 h Pimphales promelas mg/L LC50	-	-

<b><u>Persistence and degradability</u></b>	Not readily biodegradable
<b><u>Bioaccumulation</u></b>	COD = 88% (28 days), DOC removal > 95% (28 days)
<b><u>Mobility</u></b>	High mobility in soil.

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### **Disposal of wastes**

Follow all local and national government regulations in disposing material or contaminated packaging.

For U.S. - Dispose of in accordance with federal, state and local regulations. When discarded, it is considered a hazardous waste by the EPA under RCRA. The reportable quantity for methyl methacrylate is 1000 lb. (40 CFR Part 302). Add excess inhibitor before disposing.

#### **Contaminated Packaging**

Reuse of empty drums or containers is not recommended. Employees should be advised of the potential hazards due to residual material associated with empty containers. Dispose of all empty containers in accordance with local and national government regulations.

## 14. TRANSPORTATION INFORMATION

### DOT

UN / ID No	UN1993
Proper shipping name	Flammable liquid, n.o.s. (Methyl Methacrylate monomer, stabilized / N,N-Dimethyl-p-Toluidine solution)
Hazard Class	3
Packing Group	II
Reportable Quantity (RQ)	1000 lb. (methyl methacrylate)

### IATA

UN / ID No	UN1993
Proper shipping name	Flammable liquid, n.o.s. (Methyl Methacrylate monomer, stabilized / N,N-Dimethyl-p-Toluidine solution)
Hazard Class	3
Packing Group	II

### IMDG

UN / ID No	UN1993
Proper shipping name	Flammable liquid, n.o.s. (Methyl Methacrylate monomer, stabilized / N,N-Dimethyl-p-Toluidine solution)
Hazard Class	3
Packing Group	II

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Listed	United States Toxic Substances Control Act, Section 8(b) Inventory
<b>DSL</b>	Listed	Canadian Domestic Substances List
<b>EINECS</b>	Listed	European Inventory of Existing Chemical Substances

<b><u>EU Regulations</u></b>	EC No. 1272/2008 (CLP) Classification, Labeling, Packaging Medical Devices Directive 93/42/EEC - Class I Medical Devices
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<b><u>US Federal Regulations</u></b>	SARA 302 – Extremely hazardous substance - not listed SARA 311 / 312 Hazard Categories Acute health hazard Yes Chronic health hazard No Fire hazard Yes Sudden release of pressure hazard No Reactive hazard Yes SARA 313 – Toxic chemicals – listed.
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**US State Regulations** Not established

**US State Right-to-Know Regulations**

Pennsylvania – Methyl methacrylate CAS 80-62-6

**16. OTHER INFORMATION**

<b>NFPA</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>
	2	3	2
<b>HMIS</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>
	2	3	2

**Effective Date** 11-May-2017

**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 guidance for safe handling, use, processing, storage, transportation, disposal and release. It 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