SAFETY DATA SHEET

Effective Date 11-May-2017

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, 1583, 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
11, rue Emile Zola – BP 2332
38033 Grenoble Cedex 2
France
Tel: +33 476 86 43 22
Fax: +33 476 17 19 82
Email: info@medimark-europe.com

2. HAZARDS IDENTIFICATION

Classification

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids</td>
</tr>
<tr>
<td>Skin Corrosion / Irritation</td>
</tr>
<tr>
<td>Skin Sensitization</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity - Single Exposure (Respiratory)</td>
</tr>
</tbody>
</table>

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 CO2, for extinguion.

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight - %</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Methacrylate</td>
<td>80-62-6</td>
<td>&gt;95</td>
<td>*</td>
</tr>
<tr>
<td>N, N-Dimethyl-p-Toluidine</td>
<td>99-97-8</td>
<td>&lt;2</td>
<td>*</td>
</tr>
</tbody>
</table>

*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 (CO₂), 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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Methacrylate 80-62-6</td>
<td>STEL: 100 ppm</td>
<td>TWA: 100 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA: 50 ppm</td>
<td>TWA: 410 mg/m³</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks / Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Clear or slightly tinted</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Melting point / Freezing point</td>
<td>-48°C / -54.4°F</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>101°C / 214°F</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>12°C / 54°F</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>n/a (liquid)</td>
<td></td>
</tr>
<tr>
<td>Flammability limits in air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>0.94</td>
<td>Water = 1</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>421°C / 790°F</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not determined</td>
<td></td>
</tr>
</tbody>
</table>

Other information

Density: 0.94 g/mL

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

- **Inhalation**: Harmful if inhaled.
- **Eye contact**: Causes severe eye irritation.
- **Skin contact**: Causes skin irritation.
- **Ingestion**: May be harmful if swallowed.

Component information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ORAL LD₅₀</th>
<th>DERMAL LD₅₀</th>
<th>INHALATION TC₅₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Methacrylate 80-62-6</td>
<td>&gt;7900 mg/kg (rat)</td>
<td>&gt;35,500 mg/kg (rabbit)</td>
<td>7094 ppm/ 4H (rat) 125 ppm 60 mg/ m³ (human)</td>
</tr>
<tr>
<td>N, N-Dimethyl-p-Toluidine 99-97-8</td>
<td>1650 mg/kg (rat)</td>
<td>&gt;2000 mg/kg (rat)</td>
<td>498 mL/m³ (rat)</td>
</tr>
</tbody>
</table>

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**

- **Sensitization**: May cause allergic skin reaction.

- **Carcinogenicity**: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

- **STOT – single exposure**: May cause respiratory irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae / aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Methacrylate 80-62-6</td>
<td>Psuedokirchneriella subcapitata mg/L EC50</td>
<td>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; &gt;79: 96 h Oncorhynchus mykiss mg/L LC50 static; &gt;79: 96 h Oncorhynchus mykiss mg/L LC50 static</td>
<td>69: 48 h Daphnia magna mg/L EC50</td>
<td></td>
</tr>
<tr>
<td>N,N-Dimethyl-p-Toluidine 99-97-8</td>
<td>-</td>
<td>46-52: 96 h Pimphales promelas mg/L LC50</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- **Persistence and degradability**: Not readily biodegradable

- **Bioaccumulation**: COD = 88% (28 days), DOC removal > 95% (28 days)

- **Mobility**: 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

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

IATA

<table>
<thead>
<tr>
<th>UN / ID No</th>
<th>UN1993</th>
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<tr>
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<tr>
<td>Hazard Class</td>
<td>3</td>
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<tr>
<td>Packing Group</td>
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IMDG

<table>
<thead>
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<tr>
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<tr>
<td>Hazard Class</td>
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</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

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

EU Regulations  EC No. 1272/2008 (CLP) Classification, Labeling, Packaging
Medical Devices Directive 93/42/EEC - Class I Medical Devices

US Federal Regulations  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.
US State Regulations  Not established

US State Right-to-Know Regulations
Pennsylvania – Methyl methacrylate CAS 80-62-6

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>3</td>
<td>2</td>
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</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

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