SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifiers
Product Name: Reline Powder
Synonym: Methacrylate Polymer, Chemically Activated, Cadmium Free, Pink

Recommended Use of the substance or mixture and Restrictions on Use
For professional dental use only

Details of the Supplier of the Safety Data Sheet
Manufacturer: Henry Schein Inc.
135 Duryea Road
Melville, NY 11747 USA

Emergency Telephone Numbers
Company Phone Number: Chemtrec US: (800) 424-9300
Emergency Telephone: International: 001 703-527-3887

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Hazard Class - Physical, Health, Environmental
Eye Damage/Irritation 2
Skin Sensitizer 1

OSHA Defined Hazards
Combustible dust, may form combustible dust concentrations in air, explosion hazard

Label Elements - Pictograms, Signal Word, Hazard Statements, Precautionary Statements, & Supplemental Information

Signal Word
Warning

Hazard Statements
H317 May cause an allergic skin reaction
H320 Causes eye irritation

Precautionary Statements - Prevention, Response, & Disposal
P240 Ground/bond container and receiving equipment
P261 Avoid breathing dust/fume/gas/mist/vapours/spray
P264 Wash … thoroughly after handling
P272 Contaminated work clothing should not be allowed out of the workplace
P280 Wear protective gloves/protective clothing/eye protection/face protection
P321 Specific treatment (see … on this label)
P363 Wash contaminated clothing before reuse
P302+P352 IF ON SKIN: Wash with soap and water

SDS for: Reline Powder
Printed: 5/12/2015 at 10:22:37AM
IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P333+P313 If skin irritation or a rash occurs: Get medical advice/attention.
P337+P313 Get medical advice/attention.
P501 Dispose of contents/container to …

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Cas No.</th>
<th>Weight-%</th>
<th>GHS Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propenoic acid, 2-methyl-, ethyl ester, homopolymer</td>
<td>9003-42-3</td>
<td>90 — 100</td>
<td>Eye Damage/Irritation 2B (H320)</td>
</tr>
<tr>
<td>Benzoyl Peroxide</td>
<td>94-36-0</td>
<td>1 — 5</td>
<td>Eye Damage/Irritation 2A (H319) Skin Sensitizer 1 (H317)</td>
</tr>
</tbody>
</table>

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**4. FIRST AID MEASURES**

**General Advice**
Provide the SDS to medical personnel for treatment.

**Inhalation:**
Remove victim to fresh air. Seek immediate medical attention.

**Eye Contact:**
If product gets in the eyes, flush with lukewarm water for at least 15 minutes. If irritation occurs, contact a physician.

**Skin Contact:**
Rinse thoroughly with lukewarm water, followed by a thorough washing of the affected area with soap and water. If irritation, redness or swelling persists, contact a physician immediately.

**Clothing:**
Remove contaminated clothing, wash thoroughly before reuse.

**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.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**
Water, Chemical (alcohol-resistant) foam, dry chemical, or carbon dioxide.

**Unsuitable Extinguishing Media**
Not known

**Specific Hazards Arising from the Chemical**
Polymers are combustible dusts, care should be taken to avoid creating explosive concentrations in the air. Follow grounding and bonding procedures.
Special Fire Fighting Procedures:
Avoid extinguishing methods, which may generate dust clouds. Water stream can disperse dust into air producing a fire hazard and possible explosion hazard if exposed to ignition source. Firefighters should wear self-contained breathing apparatus.

Protective Equipment and Precautions for Firefighters
Polymer dust is combustible. The explosive limits of the polymer particles suspended in air are approximately those of coal dust. Polymers are sensitive to static discharge, follow grounding and bounding procedures. Polymers are not sensitive to mechanical impacts.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Personal Precautions
Before cleaning any spill or leak, individuals must wear appropriate Personal Protective Equipment that is specified in section 8. Keep airborne particulates at a minimum when cleaning up spills. Deny entry to all unprotected individuals. Remove any contaminated clothing and wash thoroughly before reuse.

Environmental Precautions
Extinguish all ignition sources. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water. 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.

Methods and Material for Containment and Cleaning Up
Methods for Containment
Prevent further leakage or spillage if safe to do so. Dike and contain spill with inert material (e.g. sand or earth). May contaminate water supply.

Methods for Cleaning Up
Maximize ventilation (open doors and windows) and secure all sources of ignition. Use good, local ventilation with a minimum capture velocity of 100 ft/min (30 m/min) at point of product release. 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. Not a RCRA Hazardous waste.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Advice on Safe Handling
Use in well ventilated areas. Avoid contact with skin, eyes and clothing. Avoid breathing dust. Use good personal hygiene and housekeeping. Avoid prolonged contact with the product. Use in a well-ventilated location (e.g., local exhaust ventilation, fans). After use, wash hands and exposed skin with soap and water. Do not eat, drink or smoke while handling product.

Conditions for Safe Storage, Including any Incompatibilities
Storage Conditions
Store containers in a cool, dry location, away from direct sunlight, heat, sparks, flame, other light sources, or sources of intense heat. The temperature should remain at or under 72°F (22°C) at all times. Storing at above recomended temperature will cause product performance issues. Store in accordance with National Fire Protection Association recommendations. Observe all label precautions until the container is cleaned, reconditioned, or destroyed.

Incompatible Materials
Strong oxidizers, strong oxidizing agents.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Chemical Name / CAS No.</th>
<th>OSHA Exposure Limits</th>
<th>ACGIH Exposure Limits</th>
<th>Other Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propenoic acid, 2-methyl-, ethyl ester, homopolymer 9003-42-3</td>
<td>5 mg/m³ TWA</td>
<td>5 mg/m³ TWA</td>
<td>NIOSH: 5 mg/m³ TWA</td>
</tr>
<tr>
<td>Benzoyl Peroxide 94-36-0</td>
<td>5 mg/m³ TWA</td>
<td>5 mg/m³ TWA</td>
<td>NIOSH: 5 mg/m³ TWA</td>
</tr>
</tbody>
</table>

**Engineering Controls**

Use local explosion-proof ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**Personnel Protective Equipment (PPE)**

**Respiratory Protection**

A respirator should be worn whenever workplace conditions warrant use of a respirator. If dust conditions are present, a N95 respirator dust mask is required. None required if airborne concentrations are maintained below any exposure limit that may be listed above. If necessary, use only respiratory protection authorized per U.S. OSHA's requirement in 29 CFR §1910.134 or other appropriate governing standard.

**Eye/Face Protection**

Wear safety glasses, chemical goggles when splashing is possible, when dealing with this material. If necessary, refer to U.S. OSHA 29 CFR §1910.133, or other appropriate governing standard. Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.

**Skin and Body Protection**

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

<table>
<thead>
<tr>
<th>Full contact:</th>
<th>Splash contact:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material: Nitrile rubber</td>
<td>Material: Nitrile rubber</td>
</tr>
<tr>
<td>Minimum layer thickness: 0.4 mm</td>
<td>Minimum layer thickness: 0.11 mm</td>
</tr>
<tr>
<td>Break through time: 480 min</td>
<td>Break through time: 120 min</td>
</tr>
</tbody>
</table>

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. An eyewash station and a safety shower are 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

| Appearance: Pink | Physical State: Solid Powder |
| Odor: Faint | Flash point: 579 F, 304 C |
| Vapor Density: Not Applicable | Evaporation Rate: No data available |
| % Weight Volatile (VOC): 0.00 | Fragrance VOC: 0.00 |
| % Wt. Pigment: 0.00 | |

SDS for: Reline Powder
10. STABILITY AND REACTIVITY

Material stability
Stable

Incompatible materials
Strong oxidizers

Hazardous decomposition products
Methacrylate Monomer and Oxides of Carbon when burned

Possibility of hazardous reactions
Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Mixture Toxicity
Component Toxicity

Routes of Exposure
Inhalation | Eye Contact

Target Organs
Eyes | Skin | Respiratory System

Effects of Overexposure
Inhalation
Overexposure by inhalation of titanium dioxide may include mild and temporary upper respiratory irritation with cough and shortness of breath.

Skin Contact
No data found.

Eye Contact
No data found.

Ingestion
No data found.

Product Components Listed as Carcinogenic

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Description</th>
<th>% Weight</th>
<th>Carcinogen Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
<td></td>
<td>No data available</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Component Ecotoxicity

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods
Disposal of Wastes
Dispose waste material in accordance with Federal, State, and Local regulations. It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste. Comply with all applicable federal, state and local regulations. Waste disposal options include landfilling solids at permitted sites. Incinerate in a chemical incinerator equipped with an afterburner and scrubber. Use registered transporters.

Contaminated Packaging
Reuse of empty drums or containers is not recommended. Employees should be advised of the potential hazards, due to residual flammable material, associated with empty containers. Dispose of all empty containers properly, in accordance with Federal, State and Local regulations.

### 14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Agency</th>
<th>Proper Shipping Name</th>
<th>UN Number</th>
<th>Packing Group</th>
<th>Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>Not Regulated, Polymer, NOS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IATA</td>
<td>Not Regulated, Polymer, NOS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMDG</td>
<td>Not Regulated, Polymer, NOS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 15. REGULATORY INFORMATION

**State of California Safe Drinking Water and Toxic Enforcement Act of 1986**

*Proposition 65*: WARNING! This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin:

- None

**SARA 313**

- Benzoyl Peroxide 94-36-0

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

- None

<table>
<thead>
<tr>
<th>Country</th>
<th>Regulation</th>
<th>All Components Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EINECS</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>SARA Hazard categories</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>TSCA Inventory</td>
<td>Yes</td>
</tr>
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</table>

### 16. OTHER INFORMATION

**Hazardous Material Information System (HMIS)**

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
<th>PERSONAL PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
<td>B</td>
</tr>
</tbody>
</table>

**HMIS & NFPA Hazard Rating**

Legend:

- * = Chronic Health Hazard
- 0 = INSIGNIFICANT
- 1 = SLIGHT
- 2 = MODERATE
- 3 = HIGH

**National Fire Protection Association (NFPA)**

- Flammability
- Health
- Instability
- Special

Date Prepared: 5/12/2015

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 considered a warranty or quality specification. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials on in any process, unless specified in the text.
1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifiers
Product Name: Reline Primer
Synonym: Methacrylate Monomer

MSDS ID #: M1-01
Control #: 04-053
Synonyms: MMA

1.2 Recommended Use of the substance or mixture and Restrictions on Use
Recommended Use: For professional dental use only

1.3 Details of the Supplier of the Safety Data Sheet
Supplier Address: Henry Schein Inc.
135 Duryea Road
Melville, NY 11747 USA

Authorized EU representative: Henry Schein UK Holdings Ltd.
Medcare House, Centurion Close
Gillingham Business Park
Gillingham, ME8 0SB U.K.

Contact:
Tel: +44 (0) 8708 49 08 72
Fax: +44 (0) 1634 87 87 51
Email: cbdeurope@henryschein.com
Website: www.henryscheinbrand.com

1.4 Emergency Telephone Number
Emergency Telephone: Chemtrec US: (800) 424-9300
International: 001 703-527-3887

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Class</th>
<th>Category</th>
<th>H-Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable Liquid</td>
<td>Category 2</td>
<td>H225</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Category 2</td>
<td>H315</td>
</tr>
<tr>
<td>Skin Sensitization</td>
<td>Category 1</td>
<td>H317</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity – Single Exposure – Respiratory</td>
<td>Category 3</td>
<td>H335</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental Hazards</th>
<th>Category</th>
<th>H-Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Classifiable (None)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

2.2 OSHA Defined Hazards
Not Classifiable (None)

2.3 Label Elements

2.3.1 Pictograms

![Pictogram Image]
2.3.2 Signal Word
Danger

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

2.3.4 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 fume/ gas/ mist/ vapors/ spray.
P264: Wash skin 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.

2.3.5 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 reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

2.3.6 Precautionary Statements - Storage
P405: Store locked up.

2.3.7 Precautionary Statements – Disposal
P501: Dispose of contents and container to an approved waste disposal facility.

2.4 Hazardous Not Otherwise Classified (HNOC)
Lachrymator.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>CAS No.</th>
<th>Classification</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Methacrylate Monomer</td>
<td>80-62-6</td>
<td>Flam. Liq. 2; Skin Irrt. 2; Skin Sens. 1; STOT SE 3; H225, H315, H317, H335</td>
<td>90 – 100</td>
</tr>
<tr>
<td>Hydroquinone (inhibitor)</td>
<td>123-31-9</td>
<td>none</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of First Aid Measures
4.1.1 General Advice
Provide this SDS to medical personnel for treatment.

4.1.2 Eye Contact
If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. If irritation continues, contact a physician.
4.1.3 Skin Contact
If irritation occurs and product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the affected area with soap and water. If irritation, redness or swelling persists, contact a physician immediately.

4.1.4 Inhalation
If inhaled, remove to fresh air. Give oxygen or CPR as needed. Seek immediate medical attention/advice.

4.1.5 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.

4.2 Most Important Symptoms and Effects, both Acute and Delayed
4.2.1 Symptoms
Eyes: Substance is a lachrymator, a substance that irritates the eyes and causes tears to flow.

Skin: Substance is a skin irritant and sensitizer. Prolonged skin contact may cause skin irritation and/or dermatitis contact can irritate the skin cause redness and rash. Once exposed a re-exposure can cause an allergic skin reaction, sensitizing the skin.

Inhalation: Prolonged contact can lead to respiratory irritation, breathing difficulties, and respiratory disorder.

Ingestion: Can cause behavioral changes, muscle weakness, and coma.

4.3 Indication of any immediate medical attention and special treatment needed
None

5. FIRE-FIGHTING MEASURES
5.1 Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Unsuitable Extinguishing Media
No data available

5.3 Specific Hazards Arising from the Chemical
High temperatures, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat/pressure. Closed containers may rupture or explode during runaway polymerization. Flammable vapors may also be present from over-heating/melting/decomposition. Vapors may cause fire/explosion if source of ignition is present. Employ grounding, venting and explosion relief provisions in accordance with accepted engineering practices in process operations capable of generating dust and/or static electricity. This material is stabilized using an inhibitor, inhibitor level should be maintained, contact manufacturer for specific instructions on inhibitor maintenance.

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

5.5 Protective Equipment and Precautions for Firefighters
Wear self-contained breathing apparatus for firefighting if necessary. Do not enter fire 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
6.1 Personal Precautions, Protective Equipment and Emergency Procedures
6.1.1 Personal Precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.
6.2 **Environmental Precautions**
Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

6.3 **Methods and Material for Containment and Cleaning Up**
6.3.1 **Methods for Containment**
Deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g. sand or earth). Use ONLY non-sparking tools for recovery and cleanup. Maximize ventilation (open doors and windows) 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.

6.3.2 **Methods for Cleaning Up**
Use only non-sparking tools for recovery and cleanup. Maximize ventilation (open doors and windows) 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. Clean up materials may be considered a RCRA regulated wastes.

7. **HANDLING AND STORAGE**
7.1 **Precautions for Safe Handling**
7.1.1 **Advice on Safe Handling**
Use local explosion-proof ventilation with a minimum capture velocity of 100 ft/min (30 m/min) at point of material release. Refer to Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Hygienist. Observe precautions found on label.

7.2 **Conditions for Safe Storage, Including any Incompatibilities**
7.2.1 **Storage Conditions**
Store containers in a cool, dry location, away from direct sunlight, heat, sparks, flame, other light sources, or sources of intense heat. Keep container closed after each use. Ground and bond all containers when transferring. Check inhibitor levels periodically, add to the bulk material if needed. Maintain at a minimum, the original 2-inch headspace in the product container. Do not blanket or mix with oxygen-free gas as it renders the inhibitor ineffective. Recommended storage temperature: 2 - 8 °C.

7.3 **Incompatible Materials**
Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**
8.1 **Exposure Guidelines**
The following information is given as general guidance

<table>
<thead>
<tr>
<th>Component</th>
<th>Cas#</th>
<th>Type</th>
<th>Value</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>80-62-6</td>
<td>TWA</td>
<td>50 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>100 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
</tbody>
</table>

8.2 **Appropriate Engineering Controls**
8.2.1 **Engineering Controls**
Refer to Section 7 regarding the ventilation requirements for working with this product. Use explosion-proof local exhaust at processing equipment, including buffers, sanders, grinders and polishers. High temperature processing equipment should be well ventilated.

8.3 **Individual Protection Measures, such as Personal Protective Equipment**
8.3.1 Eye/Face Protection
Face shield and/or safety glasses required based on use. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). If necessary, refer to U.S. OSHA 29 CFR §1910.133, or other appropriate governing standard. Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.

8.3.2 Skin and Body Protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Splash contact
Material: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: 66 min
Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)
This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers.

Complete body suit protecting against chemicals, flame retardant antistatic protective clothing, and the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

8.3.3 Respiratory Protection
A respirator should be worn whenever workplace conditions warrant a respirators use. Not required if airborne concentrations are maintained below the exposure limit listed in Section 2, for example using engineering controls. If necessary, use only respiratory protection authorized per U.S. OSHA's requirement in 29 CFR §1910.134 or other appropriate governing standard

8.3.4 General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. An eyewash station and a safety shower are 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

9.1 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>Odor</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
<td>Odor Threshold</td>
</tr>
<tr>
<td>pH</td>
<td>no data available</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>-48 °C</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>101 °C, 214 °F</td>
<td></td>
</tr>
<tr>
<td>Pour Point</td>
<td>no data available</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>11.5 °C, 52.7 °F</td>
<td></td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>790 °F</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>3.1</td>
<td>BuAc =1</td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>no data available</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>2.12</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>12.5</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>28 mm Hg @ 20 °C, 68 °F</td>
<td>&lt;0.01 hPa (&lt;0.01 mmHg)</td>
</tr>
<tr>
<td>Relative Density</td>
<td>0.949 g/ml @ 15.5°C</td>
<td>Water =1</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>3.5 @ 15.5 °C, 60 °F</td>
<td>Alcoh =1.12 @ 25°C</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Moderate, 1.6 WT% @ 20 °C, 68 °F</td>
<td>Negligible</td>
</tr>
<tr>
<td>Solubility in Other Solvents</td>
<td>no data available</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient: Water/Oil</td>
<td>no data available</td>
<td></td>
</tr>
<tr>
<td>Surface Tension</td>
<td>28 mN/m at 20 °C (68 °F)</td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

10.1 Reactivity
Unstable/Reactive upon depletion of inhibitor.
10.2 Chemical Stability
Stable under recommended storage conditions

10.3 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.

10.4 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.

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

10.6 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

11.1 Information on Toxicological Effects

11.1.1 Product Information
Chronic exposure to high levels of Methyl Methacrylate Monomer, can cause target organ effects such as nose, liver and kidneys.

11.2 Component Information
None provided.

11.3 Information on Physical, Chemical and Toxicological Effects

11.3.1 Symptoms
Please see section 4 of this SDS for symptoms.

11.4 Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

11.4.1 Sensitization
Prolonged skin contact may cause skin irritation and/or dermatitis and/or allergic skin reaction

11.4.2 Germ Cell Mutagenicity
Recent studies in animals have shown that high exposures do not have reproductive effects.

11.4.3 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.

11.4.4 Developmental Toxicity
No data available

11.4.5 Teratogenicity
Recent studies in animals have shown that high exposures do not have reproductive effects.

11.4.6 STOT - Single Exposure
Specific Target Organ Toxicity - May cause respiratory irritation.

11.4.7 Chronic Toxicity
Chronic exposure to high levels of Methyl Methacrylate Monomer, can cause target organ effects such as nose, liver and kidneys.

11.5 Numerical Measures of Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>LD₅₀ Oral (Rat)</th>
<th>LD₅₀ Dermal (Rabbit)</th>
<th>TC₁₉₂ Inhalation (Human)</th>
<th>TC₁₉₂ Inhalation (Rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Methacrylate</td>
<td>&gt;7900 mg/kg</td>
<td>&gt;35,500 mg/kg</td>
<td>125 ppm (60 mg/m³)</td>
<td>7094 ppm/4H</td>
</tr>
</tbody>
</table>
### 12. ECOLOGICAL INFORMATION

#### 12.1 Aquatic Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>Flathead Minnows LC₅₀</th>
<th>Daphnia Magna EC₅₀</th>
<th>Algae LC₅₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Methacrylate</td>
<td>130 mg/L, 96H</td>
<td>69 mg/L, 48H</td>
<td>170 mg/L, 96H</td>
</tr>
</tbody>
</table>

#### 12.2 Persistence and degradability
Not readily biodegradable

#### 12.3 Bioaccumulative potential
- Chemical Oxygen Demand: 88% within 28 days
- Dissolved Organic Carbon Removal: >95% within 28 days

#### 12.4 Mobility in soil
High mobility in soil

#### 12.5 Other adverse effects
No data available

### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste Treatment Methods

##### 13.1.1 Disposal of Wastes
When discarded it is a hazardous waste by the EPA under RCRA. The reportable quantity (RQ) for Methyl Methacrylate is 1000 pounds (40 CFR Part 302). After addition of excess inhibitor, dispose waste material in accordance with Federal, State, and Local regulations. Reuse of empty drums or containers is not recommended. Employees should be advised of the potential hazards, due to residual flammable material, associated with empty containers. Dispose of all empty containers properly, in accordance with Federal, State and Local regulations.

##### 13.1.2 Contaminated Packaging

### 14. TRANSPORT INFORMATION

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

#### 14.2 DOT
UN number: 1247  
Class: 3  
Packing group: II  
Proper shipping name: Methyl methacrylate monomer, stabilized  
Reportable Quantity (RQ): 1000 lbs  
Marine pollutant: No  
Poison Inhalation Hazard: No

#### 14.3 IATA
UN number: 1247  
Class: 3  
Packing group: II EMS-No: F-E, S-D  
Proper shipping name: METHYL METHACRYLATE, MONOMER, STABILIZED  
Marine pollutant: No

#### 14.4 IMDG
UN number: 1247  
Class: 3  
Packing group: II  
Proper shipping name: Methyl methacrylate monomer, stabilized

### 15. REGULATORY INFORMATION

#### 15.1 International Inventories

<table>
<thead>
<tr>
<th>TSCA</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL</td>
<td>Listed</td>
</tr>
<tr>
<td>NDSL</td>
<td>Not Listed</td>
</tr>
<tr>
<td>EINECS</td>
<td>Listed</td>
</tr>
</tbody>
</table>

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

#### 15.2 US Federal Regulations
No Data Available

#### 15.3 SARA 311/312 Hazard Categories
Acute health hazard: Yes
Chronic Health Hazard: Yes
Fire hazard: Yes
Sudden release of pressure hazard: No
Reactive Hazard: No

15.4 **SARA 313**
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15.5 **US State Regulations**
Not established

15.6 **California Proposition 65**
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

15.7 **U.S. State Right-to-Know Regulations**
Pennsylvania
Methyl methacrylate CAS-No.: 80-62-6 Revision Date: 2007-07-01

**16. OTHER INFORMATION**

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot;</td>
<td>3</td>
<td>1</td>
<td></td>
<td>Not established</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot;</td>
<td>3</td>
<td>1</td>
<td>Safety Glasses, Gloves, Lab coat or Uniform</td>
<td></td>
</tr>
</tbody>
</table>

**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
1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifiers**
Product Name: SOFT RELINE LIQUID FP  
Synonym: MONOMER SOFT RELINER

**Recommended Use of the substance or mixture and Restrictions on Use**
For professional dental use only

**Details of the Supplier of the Safety Data Sheet**
Supplier Address: Henry Schein Inc.  
135 Duryea Road  
Melville, NY 11747 USA

**Authorized EU representative:**
Henry Schein UK Holdings Ltd.  
Medcare House, Centurion Close  
Gillingham Business Park  
Gillingham, ME8 0SB U.K.

**Emergency Telephone Numbers**
Emergency Telephone: Chemtrec US: (800) 424-9300  
Emergency Telephone: International: 001 703-527-3887

2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

<table>
<thead>
<tr>
<th>Hazard Class - Physical, Health, Environmental</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquid</td>
<td>3</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>2</td>
</tr>
<tr>
<td>Eye Damage/Irritation</td>
<td>2</td>
</tr>
<tr>
<td>Skin Sensitizer</td>
<td>1</td>
</tr>
<tr>
<td>Carcinogen</td>
<td>1B</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>1B</td>
</tr>
</tbody>
</table>

**Label Elements - Pictograms, Signal Word, Hazard Statements, Precautionary Statements, & Supplemental Information**

![Pictograms]

**Signal Word**
Danger

**Hazards Statements**

<table>
<thead>
<tr>
<th>H226</th>
<th>Flammable liquid and vapour</th>
</tr>
</thead>
<tbody>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer</td>
</tr>
<tr>
<td>H360</td>
<td>May damage fertility or the unborn child</td>
</tr>
</tbody>
</table>

**Precautionary Statements - Prevention, Response, & Disposal**

<table>
<thead>
<tr>
<th>P201</th>
<th>Obtain special instructions before use</th>
</tr>
</thead>
<tbody>
<tr>
<td>P202</td>
<td>Do not handle until all safety precautions have been read and understood</td>
</tr>
<tr>
<td>P210</td>
<td>Keep away from heat/sparks/open flames/hot surfaces – No smoking</td>
</tr>
<tr>
<td>P233</td>
<td>Keep container tightly closed</td>
</tr>
<tr>
<td>P240</td>
<td>Ground/bond container and receiving equipment</td>
</tr>
<tr>
<td>P241</td>
<td>Use explosion-proof electrical/ventilating/light/…/equipment</td>
</tr>
<tr>
<td>P242</td>
<td>Use only non-sparking tools</td>
</tr>
<tr>
<td>P243</td>
<td>Take precautionary measures against static discharge</td>
</tr>
</tbody>
</table>
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Cas No.</th>
<th>Weight-%</th>
<th>GHS Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibutyl Phthalate</td>
<td>84-74-2</td>
<td>50 — 60</td>
<td>Reproductive Toxicity 1B (H360)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic toxicity 1A (H400)</td>
</tr>
<tr>
<td>Butyl Methacrylate</td>
<td>97-88-1</td>
<td>40 — 50</td>
<td>Skin Corrosion/Irritation 2 (H315)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Damage/Irritation 2A (H319)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sensitizer 1 (H317)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Specific Target Organ Toxicity - Single Exposure 3 (H336)</td>
</tr>
<tr>
<td>Dimethyltolylamine</td>
<td>99-97-8</td>
<td>1 — 5</td>
<td>Oral Toxicity Acute Tox. 3 (H301)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dermal Toxicity Acute Tox. 3 (H311)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Inhalation Toxicity Acute Tox. 3 (H331)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carcinogen 1B (H350)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Specific Target Organ Toxicity - Repeated Exposure 2 (H373)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic toxicity C3 (H412)</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES
**General Advice**
Provide the SDS to medical personnel for treatment.

**Inhalation:**
Remove victim to fresh air. Seek immediate medical attention.

**Eye Contact:**
If product gets in the eyes, flush with lukewarm water for at least 15 minutes. If irritation occurs, contact a physician.

**Skin Contact:**
Rinse thoroughly with lukewarm water, followed by a thorough washing of the affected area with soap and water. If irritation, redness or swelling persists, contact a physician immediately.

**Clothing:**
Remove contaminated clothing, wash thoroughly before reuse.

**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.

**Notes to Physician:**
This product contains N,N-Dimethyl-p-Toluidine at a low concentration (does not meet criteria for reporting in section 3). While complications from this component are not expected, the presence of this material in the body leads to formation of methemoglobin, which in sufficient concentration causes cyanosis. This is reversed spontaneously after termination of exposure. Treat cyanosis with supportive measures such as bed rest and oxygen inhalation. Thorough cleanse the entire contaminated area of the body. If extensive cyanosis is present, treat with methylene blue and vitamin B12.

---

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Chemical (alcohol-resistant) foam, dry chemical or carbon dioxide.

**Unsuitable Extinguishing Media**
Water spary or water stream may not be effective.

**Specific Hazards Arising from the Chemical**
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. This product is a flammable liquid. 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.

**Special Fire Fighting Procedures:**
Use a water spray or fog to reduce or direct vapors, and keep containers cool. Water may not be effective in actually extinguishing a fire involving this product. Do not enter fire area without proper protection. Fight fire from a safe location. Structural firefighters must wear SCBAs and full protective equipment. Heat/impurities may cause pressure to build and/or rupture closed containers, spreading fire, increasing risk of burns/injuries.

**Protective Equipment and Precautions for Firefighters**
Wear self-contained breathing apparatus for firefighting if necessary. Do not enter fire 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 appropriate Personal Protective Equipment that is specified in section 8. Deny entry to all unprotected individuals. Remove any contaminated clothing and wash thoroughly before reuse.

Environmental Precautions
Extinguish all ignition sources. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water. May contaminate water supplies/be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment. 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.

Methods and Material for Containment and Cleaning Up
Methods for Containment Prevent further leakage or spillage if safe to do so. Dike and contain spill with inert material (e.g. sand or earth). May contaminate water supply.

Methods for Cleaning Up
Maximize ventilation (open doors and windows) and secure all sources of ignition. Use good, local ventilation with a minimum capture velocity of 100 ft/min (30 m/min) at point of product release. 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. Not a RCRA Hazardous waste.

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. Do NOT use localized heat source such as band heaters to heat/melt product. Do NOT use steam. Hot boxes or hot rooms are recommended for heating the product, which can be set at a maximum temperature of 60ºC/140ºF. 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 label. Keep away from heat, sparks, and flame. Keep container closed after each use. Ground and bond all containers when transferring. Refer to Section 8 for suggested exposure controls and personal protection. Observe precautions found on label

Conditions for Safe Storage, Including any Incompatibilities
Storage Conditions
Store containers in a cool, dry location, away from direct sunlight, heat, sparks, flame, other light sources, or sources of intense heat. Store in accordance with National Fire Protection Association recommendations. Check inhibitor levels periodically, adding to the bulk material if needed. Maintain at a minimum, the original 2-inch headspace in the product container and do not blanket or mix with oxygen-free gas as it renders the inhibitor ineffective. Vapors are uninhibited and may form polymers in vents or flame arresters, resulting in blockage of vents. Product residue may remain in empty containers. Observe all label precautions until the container is cleaned, reconditioned, or destroyed.

Incompatible Materials
Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Chemical Name / CAS No.</th>
<th>OSHA Exposure Limits</th>
<th>ACGIH Exposure Limits</th>
<th>Other Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibutyl Phthalate 84-74-2</td>
<td>5 mg/m3 TWA</td>
<td>5 mg/m3 TWA</td>
<td>NIOSH: 5 mg/m3 TWA</td>
</tr>
</tbody>
</table>
Butyl Methacrylate
97-88-1

Dimethyltolylamine
99-97-8

**Engineering Controls**
Use local explosion-proof ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

**Personnel Protective Equipment (PPE)**

**Respiratory Protection**
A respirator should be worn whenever workplace conditions warrant a respirators use. None required if airborne concentrations are maintained below the exposure limit listed above. If necessary, use only respiratory protection authorized per U.S. OSHA's requirement in 29 CFR §1910.134 or other appropriate governing standard.

**Eye/Face Protection**
Wear safety glasses, chemical goggles when splashing is possible, when dealing with this material. If necessary, refer to U.S. OSHA 29 CFR §1910.133, or other appropriate governing standard. Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.

**Skin and Body Protection**
Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

- Full contact:
  - Material: Nitrile rubber
  - Minimum layer thickness: 0.4 mm
  - Break through time: 480 min

- Splash contact:
  - Material: Nitrile rubber
  - Minimum layer thickness: 0.11 mm
  - Break through time: 120 min

**General Hygiene Considerations**
Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. An eyewash station and a safety shower are 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>-9999 mmHg</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Unknown</td>
</tr>
<tr>
<td>Boiling range</td>
<td>163°C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Unknown</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Unknown</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Unknown</td>
</tr>
<tr>
<td>Odor</td>
<td>Acrid Monomer Odor</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>7.2</td>
</tr>
<tr>
<td>Melting point</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility</td>
<td>Unknown</td>
</tr>
<tr>
<td>Flash point</td>
<td>126 F,52 C</td>
</tr>
<tr>
<td>Explosive Limits</td>
<td>0%</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>294°C</td>
</tr>
<tr>
<td>Grams VOC/liter less water</td>
<td>0.00</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Note: Materials listed as stable may become unstable up depletion of inhibitors (such as mequinol or hydroquinone), contact the manufacturer for exact levels and instructions on inhibitor maintenance.

Material stability
Stable

Incompatible materials
No data available

Hazardous decomposition products
No data available

Possibility of hazardous reactions
Hazardous polymerization may occur.

11. TOXICOLOGICAL INFORMATION

Mixture Toxicity
Inhalation Toxicity: 93mg/L

Component Toxicity
97-88-1 Butyl Methacrylate
Inhalation: 4,910 ppm (Rat)

No data available

Eyes GI Tract Respiratory System

Effects of Overexposure

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Description</th>
<th>% Weight</th>
<th>Carcinogen Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>99-97-8</td>
<td>Dimethyltolylamine</td>
<td>1 to 5%</td>
<td>Dimethyltolylamine: DMPT is known to the State of California to be a carcinogen, and is a Prop. 65 listed chemical. DMPT is not listed as a carcinogen by IARC, and ACGIH</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Component Ecotoxicity
Dibutyl Phthalate

96 Hr LC50 Pimephales promelas: 0.71 - 1.2 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 0.31 - 5.45 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: >1.24 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 1.24 - 5.3 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 1.38 - 1.74 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 0.42 - 1.28 mg/L [static]; 48 Hr EC50 Daphnia magna: 2.99 mg/L [Static]; 48 Hr EC50 Daphnia magna: 3.4 mg/L; 72 Hr EC50 Desmodesmus subspicatus: 1.2 mg/L; 96 Hr EC50 Pseudokirchneriella subcapitata: 0.4 mg/L [static]
Butyl Methacrylate  96 Hr LC50 Pimephales promelas: 11 mg/L [flow-through]
48 Hr EC50 Daphnia magna: 32 mg/L
96 Hr EC50 Pseudokirchneriella subcapitata: 57 mg/L

Dimethyldioctylamine  96 Hr LC50 Pimephales promelas: 42 - 50.5 mg/L [flow-through]

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods
Disposal of Wastes
When discarded it is a hazardous waste by the EPA under RCRA. The reportable quantity (RQ) for Ethyl Methacrylate is 1000 pounds (40 CFR Part 302). After addition of excess inhibitor, dispose waste material in accordance with Federal, State, and Local regulations. It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste. Comply with all applicable federal, state and local regulations. Waste disposal options include landfilling solids at permitted sites. Incinerate in a chemical incinerator equipped with an afterburner and scrubber. Use registered transporters.

Contaminated Packaging
Reuse of empty drums or containers is not recommended. Employees should be advised of the potential hazards, due to residual flammable material, associated with empty containers. Dispose of all empty containers properly, in accordance with Federal, State and Local regulations.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Agency</th>
<th>Proper Shipping Name</th>
<th>UN Number</th>
<th>Packing Group</th>
<th>Hazard Class</th>
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<td>DOT</td>
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15. REGULATORY INFORMATION

This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin:
- 99-97-8 Dimethyldioctylamine  1 to 5 % Carcinogen
- 84-74-2 Dibutyl Phthalate  50 to 60 % Teratogen

SARA 313
Dibutyl Phthalate  84-74-2

US State Right-to-Know Regulations
- None

<table>
<thead>
<tr>
<th>Country</th>
<th>Regulation</th>
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<tr>
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<td>EINECS</td>
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<td>SARA Hazard categories</td>
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<td>TSCA Inventory</td>
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16. OTHER INFORMATION

Hazardous Material Information System (HMIS)

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<td>FLAMMABILITY</td>
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<td>PHYSICAL HAZARD</td>
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<td>PERSONAL PROTECTION</td>
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HMIS & NFPA Hazard Rating

Legend
- = Chronic Health Hazard
0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH

National Fire Protection Association (NFPA)

Flammability

Health

Instability

Special

Date Prepared: 4/2/2015

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 considered a warranty or quality specification. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials on in any process, unless specified in the text.