

SAFETY DATA SHEETS

This SDS packet was issued with item:

072761187

N/A



MATERIAL SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: Lucitone® FasPor™ + Pourable Denture Base Liquid
Product Number: 682007, 682049, 682415
MSDS Code Number: 185

Manufacturer: Dentsply Prosthetics
Address: 570 West College Ave.
York, PA 17405-0872
Information Telephone Number: 717-845-7511
Emergency Telephone Number: 800-424-9300 Chemtrec
Email: Prosthetics_MSDS@Dentsply.com

Product Use: Denture base material

Date of Last Revision: October 11, 2007

SECTION 2 HAZARDS IDENTIFICATION

Emergency Overview: Flammable liquid and vapor. Hazardous polymerization may occur. May cause respiratory tract, eye and skin irritation. Prolonged or repeated contact may cause allergic skin reaction (skin sensitization). Inhalation of vapors may cause dizziness, headache, and other central nervous system effects.

EU Preparation Classification (1999/45/EC): F, Xi, R11, R37/38, R43

SECTION 3 COMPOSITION INFORMATION ON INGREDIENTS

Ingredient	CAS No./EINECS No.	Percent	EC Substance Classification (67/548/EEC)
Methyl Methacrylate	80-62-6/201-297-1	90-100	F, Xi, R11, R37/38, R43
1,4-Butanediol dimethacrylate	2082-81-7 / 218-218-1	1-5	Xi, R36/37, R43

See Section 16 for further information on EU Classification.

SECTION 4 FIRST AID MEASURES

Eye Contact: Flush eyes with water for at least 15 minutes, holding the eyelids apart. Get immediate medical attention.

Skin Contact: Wash skin with soap and water. Get medical attention if irritation develops. Launder contaminated clothing before re-use.

Ingestion: If small quantities are swallowed, rinse out mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention.

Inhalation: Remove victim to fresh air. If breathing is difficult, have qualified personnel administer oxygen, and obtain immediate medical attention.

SECTION 5 FIRE FIGHTING PROCEDURES

Extinguishing Media: Use carbon dioxide, foam, water spray or water fog.

Firefighting Procedures: Do not enter fire area without proper protection. Fight fire from safe distance or protected location. Firefighters should wear full emergency equipment and approved positive pressure self-contained breathing apparatus. Water may be ineffective unless used as a fine spray or fog. Use water to cool fire-exposed containers.

Unusual Fire/Explosion Hazards: Vapors are heavier than air and may travel to ignition source and flash back. Heat of fire may cause an exothermic autopolymerization reaction. Emits toxic fumes under fire conditions. Closed containers may explode due to pressure build up when exposed to extreme heat.

Known or Anticipated Hazardous Products of Combustion: Carbon monoxide, carbon dioxide, methyl methacrylate, and irritating smoke and fumes.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Provide explosion-proof ventilation. Wear appropriate protective clothing as described in Section 8. Eliminate all ignition sources. Contain and absorb spills with inert material and transfer to a suitable container for disposal. Do not allow spills to be released into the environment.

Personal Precautions: Avoid contact with skin, eyes or clothing. Avoid breathing vapors.

Environmental Precautions: Do not allow spills to enter sewers or waterways.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Keep away from heat, sparks and flames. Ground container when pouring. Do not expose to direct sunlight.

Empty containers retain product residues can be hazardous. Follow all MSDS precautions when handling empty containers.

Storage: Store in a cool, dry, well ventilated area. Keep container tightly closed when not in use. Do not store in direct sunlight. Prevent moisture contact. Protect from physical damage. Keep away from oxidizers and other incompatible materials.

SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

Occupational Exposure Limits:

Methyl Methacrylate	50 ppm TWA TLV 100 ppm STEL TLV 100 ppm PEL 50 ppm TWA DFG MAK 50 ppm TWA UK WEL 100 ppm STEL UK WEL
1,4-Butanediol dimethacrylate	None Established

Engineering Controls: Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits. Use explosion-proof equipment where required.

Personal Protective Equipment:

Eye Protection: Wear safety glasses when the possibility exists for eye contact due to splashing or spraying material.

Skin Protection: Wear nitrile rubber or other impervious gloves to minimize skin contact.

Respiratory Protection: An approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure

air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. Selection and use of respiratory equipment must be in accordance with appropriate regulations and good industrial hygiene practice.

Other Protective Clothing or Equipment: Wear impervious clothing to prevent any contact with this product, such as gloves, apron, boots, or whole body suit.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear liquid, with an ester-like odor.

Boiling Point: 214°F (101°C)

Freezing Point: Not available

Solubility in Water: 1.6 g/L @ 68°F (20°C)

Vapor Pressure (mmHg): Not available

Evaporation Rate: >1 (Bac = 1)

% Volatile by Volume: 97%

Flammable Limits in Air: LEL: 2.1%

UEL: 12.5%

Melting Point: -54°F (-48°C)

Specific Gravity: 0.94

pH: Not available

Vapor Density: 3.45

Viscosity: Not applicable

Flashpoint: 50°F (10°C) TCC

Autoignition Temperature: 806°F (430°C)

SECTION 10 STABILITY AND REACTIVITY

Stability: Unstable if heated.

Conditions to Avoid (stability): Heat, sparks, open flame and other ignition sources, elevated temperatures, direct sunlight.

Incompatibility with Other Materials: Avoid contact with oxidizing agents, reducing agents, acids, and bases.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, methyl methacrylate, and irritating smoke and fumes.

Hazardous Polymerization: Polymerization can occur. Conditions leading to polymerization are excessive heat, oxygen-free atmosphere inhibitor depletion (due to excessive aging), direct sunlight, and contamination with polymerization catalysts.

SECTION 11 TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: Liquid and vapors can cause moderate irritation (tears, blurred vision and redness).

Skin: May cause skin irritation with allergic skin reaction (skin sensitization).

Inhalation: May cause respiratory tract irritation with coughing, mucous production and shortness of breath. High concentration is irritating to the respiratory tract and may cause dizziness, headache and anesthetic effects.

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

Chronic Health Effects: Prolonged or repeated overexposure may cause skin irritation or sensitization in some individuals, as well as kidney, lung, liver, and heart damage.

Carcinogenicity: None of the components of this product are listed as carcinogens by OSHA, IARC or NTP or the EU directive.

Mutagenicity: Methyl methacrylate has tested positive in some mutagenicity test.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing skin conditions may be at increased risk from exposure.

Toxicological Data:

Methyl Methacrylate: Oral rat LD50: 7900 mg/kg; Dermal rabbit LD50: >35,500 mg/kg; Inhalation Rat LC50 4h: 7093 ppm

1,4-Butanediol dimethacrylate: Oral rat LD50: 10,120 mg/kg; Dermal rabbit LD50: >3,000 mg/kg

SECTION 12 ECOLOGICAL INFORMATION

Methyl Methacrylate	Fathead minnow LC50 96h: 130 mg/L
	Algae EC50 48h: 170 mg/L
1,4-Butanediol dimethacrylate	Fish LC50 48 h: 32.5 mg/L

SECTION 13 DISPOSAL CONSIDERATIONS

This product will polymerize when exposed to sunlight. The product should be disposed of in accordance with Federal, State and local regulations.

SECTION 14 TRANSPORT INFORMATION

DOT Shipping Name: Methyl Methacrylate Monomer, Stabilized
DOT Hazard Class: 3, PG II
UN Number: UN1247
DOT Labels Required (49CFR172.101): Flammable Liquid

IATA Shipping Name: Methyl Methacrylate Monomer, Stabilized
IATA Hazard Class: 3, PG II
UN Number: UN1247
IATA Hazard Labels Required: Flammable Liquid

IMDG Shipping Name: Methyl Methacrylate Monomer, Stabilized
IMDG Class: 3, PG II
UN Number: UN1247
IMDG Label: Flammable Liquid

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

CERCLA 103 Reportable Quantity: Releases above the RQ of 1,000 lbs (based on the RQ for methyl methacrylate of 1,000 lbs present at 100% max) must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA TITLE III:

Hazard Category For Section 311/312: Acute Health, Chronic Health, Fire Hazard, Reactivity.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Methyl Methacrylate	80-62-6	90-100%
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Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: This product is a medical device and not subject to chemical notification requirements.

U.S. STATE REGULATIONS

California Proposition 65: This product contains the following substances known to the state of California to cause reproductive toxicity (birth defects): Toluene <20 ppm

INTERNATIONAL REGULATIONS:

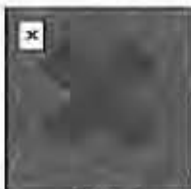
Canadian Environmental Protection Act: This product is a medical device and not subject to chemical notification requirements.

Canadian WHMIS Classification: Medical devices are not subject to WHMIS.

European Community Labeling: Contains Methyl Methacrylate



Highly Flammable



Irritant

R11 Highly flammable.
R37/38 Irritating to respiratory system and skin
R43 May cause sensitization by skin contact.
S16 Keep away from sources of ignition – No smoking.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical attention
S24/25 Avoid contact with skin and eyes.
S36/37 Wear suitable protective clothing and gloves.

European Inventory of New and Existing Chemicals Substances (EINECS): This product is a medical device and not subject to chemical notification requirements.

Australian Inventory of Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

China Inventory of Existing Chemicals and Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

Japanese Existing and New Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

Korean Existing Chemicals List: This product is a medical device and not subject to chemical notification requirements.

Philippine Inventory of Chemicals and Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

SECTION 16 OTHER INFORMATION

HMIS Hazard Rating:

Health – 2 Fire Hazard – 3 Reactivity – 2

EU Classes and Risk Phrases for Reference (See Sections 2 and 3):

F Flammable

Xi Irritant

R11 Highly flammable.

R36/37 Irritating to eyes and respiratory tract.

R37/38 Irritating to respiratory tract and skin.

R43 May cause sensitization by skin contact.

Revision Date: 10/11/2007

Supersedes: 08/13/2002

DENTSPLY International

Safety Data Sheet

Safety Data Sheet (conforms to with Regulation (EC)
1907/2006, Regulation (EC) 1272/2008 and Regulation
(EC) 2015/830), US 29CFR1910.1200, Canada Hazardous
Products Regulation

Date Issued: 13 August 2002

Document Number:185

Date Revised: 27 March 2017

Revision Number: 7

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier:

Trade Name (as labeled):

Lucitone® FasPor™ + Pourable Denture Base Liquid

Part/Item Number:

682007, 682049, 682415

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:

Recommended Use:

Dentsply Sirona Prosthetics

Restrictions on Use:

For Professional Use Only

1.3 Details of the Supplier of the Safety Data Sheet:

Manufacturer/Supplier Name:

Dentsply Sirona Prosthetics

Manufacturer/Supplier Address:

570 West College Ave.

York, PA 17401

Manufacturer/Supplier Telephone Number:

717-845-7511 (Product Information)

Email address:

Prosthetics_MSDS@Dentsplysirona.com

1.4 Emergency Telephone Number:

Emergency Contact Telephone Number:

800-424-9300 Chemtrec

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture:

GHS Classification:		
Health	Environmental	Physical
Skin Irritant Category 2 (H315) Skin Sensitizer Category 1 (H317) Specific Target Organ Toxicity-Single Exposure Category 3 (H335)	Aquatic Chronic Toxicity Category 3 (H412)	Flammable Liquid Category 2 (H225)

2.2 Label Elements:



Signal Word: Danger

Contains: Methyl Methacrylate and 2-(2H-benzotriazol-2-yl)-p-cresol

Hazard Phrases	Precautionary Phrases
H225 Highly flammable liquid and vapor. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects.	P210 Keep away from heat, sparks, open flames, and hot surfaces.-No smoking. P233 Keep container tightly closed. P240 Ground or bond container and receiving equipment. P241 Use explosion-proof electrical, ventilating, and lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing mists, vapors or spray. P264 Wash exposed skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves, protective clothing, eye protections and face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P333+P313 If skin irritation or rash occurs: Get medical attention. P362+P364 Take off contaminated clothing and wash it before reuse. P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. P312 Call a POISON CENTER or doctor if you feel unwell. P370+P378 In case of fire: Use carbon dioxide, foam, water spray or water fog for extinction. P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents and container in accordance with local and national regulations.

2.3 Other Hazards: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture:

Hazardous Components	C.A.S. #	EINECS # / REACH Registration #	Classification	WT %
Methyl Methacrylate	80-62-6	201-297-1 /	Flam. Liq. 2, H225 Skin Irrit. 2, H315	90-100

			Skin Sens. 1, H317 STOT SE 3, H335	
1,4 Butanediol dimethacrylate	2082-81-7	218-218-1 /	Skin Sens. 1B, H317	1-5
2-(2H-benzotriazol-2-yl)-p-cresol	2440-22-4	219-470-5 /	Skin Sens. 1B, H317 Aq. Chronic 1, H410	<0.5

The exact concentration is being withheld as a trade secret.

Refer to Section 16 for the full text of the GHS Classifications.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye	Rinse thoroughly with water, while holding the eye lids open to be sure the material is washed out. Get medical attention if irritation or symptoms of exposure develop.
Skin	Remove clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation or rash develops. Launder contaminated clothing before re-use.
Inhalation	Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention if symptoms of exposure persist.
Ingestion	If small quantities are swallowed, rinse out mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious or drowsy person. Get medical attention if you feel unwell.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed:

May cause eye, skin, and respiratory tract irritation. Prolonged or repeated contact may cause allergic skin reaction (skin rash). Inhalation of vapors may cause dizziness, headache, and other central nervous system effects.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed:

Immediate medical attention should not be required.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media: Use carbon dioxide, foam, water spray or water fog.

5.2 Special Hazards Arising from the Substance or Mixture:

Vapors are heavier than air and may travel to ignition source and flash back. Heat of fire may cause an exothermic auto polymerization reaction. Emits toxic fumes under fire conditions. Closed containers may explode due to pressure build up when exposed to extreme heat. Thermal decomposition may yield carbon monoxide, carbon dioxide, methyl methacrylate, and irritating smoke and fumes.

5.3 Advice for Fire-Fighters:

Fire Fighting Procedures/Precautions for Fire Fighters:	Fight fire from safe distance or protected location. Water may be ineffective unless used as a fine spray or fog. Use water to cool fire-exposed containers. Contain water used in firefighting from entering sewers or natural waterways. Firefighters should wear full emergency equipment and approved positive pressure self-contained breathing apparatus. Do not enter fire area without proper protection.
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6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Evacuate spill area and keep unprotected personnel away. Remove all sources of ignition. Ventilate area with explosion proof equipment. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Wear appropriate protective clothing as described in Section 8. If spill has not ignited, use water spray to disperse the vapors and protect personnel attempting to stop leak.

6.2 Environmental Precautions:

Avoid releases to the environment. Report releases as required by local and national authorities.

6.3 Methods and Material for Containment and Cleaning up:

Contain and absorb spills with inert material and transfer to a suitable container for disposal.

6.4 Reference to Other Sections:

Refer to Section 8 for Personal Protective Equipment and Section 13 for Disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

Avoid contact with the eyes, skin and clothing. Avoid breathing vapors or mists. Wear protective clothing and equipment as described in Section 8. Use only with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep product away from heat, sparks, flames and all other sources of ignition. Do not permit smoking in use or storage areas. Use with non-sparking tools and explosion proof equipment. Electrically bond and ground containers for transfer.

Do not cut, drill, grind or weld on or near containers, even empty containers. Empty containers retain product residues can be hazardous. Follow all SDS precautions when handling empty containers.

7.2 Conditions for Safe Storage, Including Any Incompatibilities: Store in accordance with regulations for the storage of flammable liquids. Store in a dry, well-ventilated area away from heat, direct sunlight and all sources of ignition. Keep away from oxidizers and other incompatible materials. Prevent moisture contact. Protect from physical damage. Keep container tightly closed when not in use.

7.3 Specific End Use (s): For professional use only.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Occupational Exposure Limits:

Methyl Methacrylate	50 ppm TWA, 100 ppm STEL ACGIH TLV (Sensitizer) 100 ppm TWA OSHA PEL
	50 ppm TWA, 100 ppm STEL DFG MAK
	Belgium: 50 ppm TWA, 100 ppm STEL
	50 ppm TWA, 100 ppm STEL UK WEL
	50 ppm TWA, 100 ppm STEL EU IOEL
1,4 Butanediol dimethacrylate	None Established
2-(2H-benzotriazol-2-yl)-p-cresol	None Established
Biological Exposure Limits: None Established	

8.2 Exposure Controls:

Appropriate Engineering Controls: Use general ventilation or local exhaust as required to maintain exposures below the occupational exposure limits. Use explosion-proof equipment where required.

Individual Protection Measures (PPE):

Specific Eye/face Protection: Wear safety glasses when the possibility exists for eye contact due to splashing or spraying material.

Specific Skin Protection: Wear nitrile rubber or other impervious gloves to prevent skin contact. Wear impervious clothing if needed to prevent any contact with this product, such as gloves, apron, boots, or whole body suit.

Specific Respiratory Protection: None required with adequate ventilation. If the exposure limits are exceeded an approved organic vapor respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.

Specific Thermal Hazards: None required.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance:	Clear liquid	Explosive limits:	LEL: 2.1% UEL: 12.5%
Odor:	Ester-like odor	Vapor pressure (mmHg):	29 mmHg @ 68°F (20°C)
Odor threshold:	Not available	Vapor density:	3.45
pH:	Not available	Relative density:	0.94
Melting/freezing point:	-54°F (-48°C)	Solubility(ies):	1.6 g/L @ 68°F (20°C)
Initial boiling point and boiling range:	214°F (101°C)	Partition coefficient: n-octanol/water:	Not available
Flash point:	50°F (10°C) TCC	Auto-ignition temperature:	806°F (430°C)

Evaporation rate:	>1	Decomposition temperature:	Not available
Flammability (solid, gas):	Not applicable	Viscosity:	Not available
Explosive Properties:	Vapors may be explosive in confined areas.	Oxidizing Properties:	None

9.2 Other Information: None available

10. STABILITY AND REACTIVITY

10.1 Reactivity: Polymerization can occur.

10.2 Chemical Stability: Unstable if heated.

10.3 Possibility of Hazardous Reactions: Polymerization can occur. Conditions leading to polymerization are excessive heat, oxygen-free atmosphere inhibitor depletion (due to excessive aging), direct sunlight, and contamination with polymerization catalysts.

10.4 Conditions to Avoid: Avoid heat, sparks, open flame and other ignition sources, elevated temperatures, direct sunlight, and moisture.

10.5 Incompatible materials: Avoid contact with oxidizing agents, reducing agents, acids, and bases.

10.6 Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, methyl methacrylate, and irritating smoke and fumes.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Potential Health Effects:

Eyes: Liquid and vapors can cause irritation with tears, blurred vision and redness upon contact.

Skin: May cause irritation. May cause skin irritation with an allergic skin reaction (skin sensitization).

Ingestion: May cause irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

Inhalation: May cause respiratory tract irritation with coughing, mucous production and shortness of breath. High concentration is irritating to the respiratory tract and may cause dizziness, headache and anesthetic effects.

Chronic Health Effects: Prolonged or repeated overexposure may cause skin irritation or sensitization in some individuals, as well as kidney, lung, liver, and heart damage.

Irritation: Methyl Methacrylate: Moderately to slightly irritating to rabbit skin. Slightly to non-irritating to rabbit eyes. 1,4 Butanediol dimethacrylate: Not irritating to rabbit skin and eyes. 2-(2H-benzotriazol-2-yl)-p-cresol: Not irritating to rat skin and rabbit eyes.

Corrosivity: No data available. This product is not expected to be corrosive.

Sensitization: Methyl Methacrylate: Sensitizing in Mouse local lymphnode assay (LLNA). 2-(2H-benzotriazol-2-yl)-p-cresol: Strong sensitizer in Guinea pig maximization test.

Carcinogenicity: Methyl Methacrylate: The results of a 2-year inhalation studies conducted for NTP showed no evidence of carcinogenicity of methyl methacrylate for male rats exposed at 500 or 1,000 ppm and female rats exposed at 250, 500 or 1,000 ppm. In another study, no increase was seen in the number or type of tumors in either rats or hamsters from a chronic inhalation study. No carcinogenic activity was also reported in a chronic oral study. However, acute oral exposure studies and structure-activity relationship comparisons with other acrylates suggest that the introduction of a methyl group to the acrylate moiety (e.g., EC to MMA) negates carcinogenic activity. None of the components are listed as carcinogens by

OSHA, IARC, NTP, ACGIH or the EU CLP.

Mutagenicity: Methyl Methacrylate: Negative in AMES test, positive and negative in in-vitro studies. Negative in vivo studies. 1,4 Butanediol Dimethacrylate: Positive for mutagenicity in the mouse lymphoma assay but was negative for mutagenicity in the Ames test.

Aspiration Hazard: Not an aspiration hazard.

Acute Toxicity Data:

Methyl Methacrylate: Oral rat LD50- 7900 mg/kg; Skin rabbit LD50- >5000 mg/kg; Inhalation rat LC50-7093 ppm/4hr
1,4-Butanediol dimethacrylate: Oral rat LD50- 10,060 mg/kg; Skin rabbit LD50- >3,000 mg/kg
2-(2H-benzotriazol-2-yl)-p-cresol: Oral rat LD50-10000 mg/kg; Inhalation rat ->590 mg/m³/4hr; Skin rat LD50- >2000 mg/kg

Reproductive Toxicity Data: Methyl Methacrylate: In a study in rats, there were no developmental effects, although there were decreases in maternal body weight following inhalation of concentrations up to 8,315 mg/m³. There was no reduction in fertility in a dominant lethal assay in mice exposed to this compound at concentrations up to 36,900 mg/m³ and no adverse effects on reproductive organs in repeated dose studies conducted to date.

Specific Target Organ Toxicity Single Exposure (STOT-SE): Methyl methacrylate: In an inhalation study with dogs, a 2000 ppm dose showed a drop in arterial blood pressure and GI motor activities. The lethal oral dose for methyl methacrylate is 6 to 9 g/kg in lab animals. Poisoned animals exhibit respiratory depression, and coma; also irritation of skin, eyes and respiratory tract.

Specific Target Organ Toxicity Repeated Exposure (STOT-RE): Methyl Methacrylate: Impairment of locomotor activity and learning and behavioral effects on the brain were observed in rats exposed orally to 500 mg/kg by weight per day for 21 days.

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Methyl Methacrylate: 96h LC50 Fathead minnow: 130 mg/L; 48h EC50 Algae: 170 mg/L
2-(2H-benzotriazol-2-yl)-p-cresol: 96 hr LC50 Rainbow trout->0.17 mg/L

This product is classified as harmful to the aquatic environment with long-term adverse effects. Releases to the environment should be avoided.

12.2 Persistence and Degradability: Methyl mathacrylate: Readily biodegradable - 88% after 28 days. 2-(2H-benzotriazol-2-yl)-p-cresol: In screening tests no biodegradation was seen.

12.3 Bio-accumulative Potential: The potential for bioaccumulate is expected to be low for methyl methacrylate.

12.4 Mobility in Soil: Methyl methacrylate: Is expected to have very high to high mobility in soil.

12.5 Results of PBT and vPvB Assessment: Not required

12.6 Other Adverse Effects: No adverse effects are expected

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Waste Treatment Recommendations: Dispose in accordance with national and local regulations.

14. TRANSPORT INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
DOT	UN1247	Methyl Methacrylate Monomer, Stabilized	3	PG II	Not applicable
ADR/RID	UN1247	Methyl Methacrylate Monomer, Stabilized	3	PG II	Not applicable
IMDG	UN1247	Methyl Methacrylate Monomer, Stabilized	3	PG II	Not applicable
IATA/ICAO	UN1247	Methyl Methacrylate Monomer, Stabilized	3	PG II	Not applicable

14.6 Special Precautions for User: Not applicable.

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

U.S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): Releases above the RQ of 1,000 lbs (based on the RQ for methyl methacrylate of 1,000 lbs present at 90-100%) must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Toxic Substances Control Act (TSCA): This product is a medical device and not subject to chemical notification requirements.

Clean Water Act (CWA): This material is not regulated under the Clean Water Act.

Clean Air Act (CAA): Methyl methacrylate is regulated under the Clean Air Act.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 (40 CFR 370) Hazard Categories: Acute Health, Fire Hazard.

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

Components	C.A.S. #	WT %
Methyl Methacrylate	80-62-6	90-100%

State Regulations

California: This product contains the following substances known to the state of California to cause cancer and/or reproductive toxicity: Toluene (<20 ppm).

International Regulations

Canadian Environmental Protection Act: This product is a medical device and not subject to chemical

notification requirements.

European Inventory of Existing Chemicals (EINECS): This product is a medical device and not subject to chemical notification requirements.

EU REACH: This product is a medical device and not subject to chemical notification requirements.

Australian Inventory of Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

China Inventory of Existing Chemicals and Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

Korean Existing Chemicals List: This product is a medical device and not subject to chemical notification requirements.

Philippine Inventory of Chemicals and Chemical Substances: This product is a medical device and not subject to chemical notification requirements.

15.2 Chemical Safety Assessment: None required.

16. OTHER INFORMATION

HMIS Hazard Rating:

Health – 2 Flammability – 3 Physical Hazard– 2

Full text of Classification abbreviations used in Section 2 and 3:

Aquatic Chronic 1 Aquatic Chronic Toxicity Category 1

Aquatic Chronic 3 Aquatic Chronic Toxicity Category 3

Flam. Liq. 2 Flammable Liquid Category 2

Skin Irrit. 2 Skin Irritant Category 2

Skin Sens. 1 Skin Sensitizer Category 1

Skin Sens. 1B Skin Sensitizer Category 1B

STOT-SE 3 Specific Target Organ Toxicity Single Exposure Category 3

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Supersedes: 26 February 2014

Date Updated: 22 March 2017

Revision Summary: 3 Year update. Changes to Sections 1, 3, 8, 11 & 16

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, ECHA REACH Registration Website, Country websites for occupational exposure limits.