

SAFETY DATA SHEETS

This SDS packet was issued with item:

075031414

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

075031406

ACTIO MSDS ID: 871437

BOND

Adaper

View Section : 12345678910111213141516

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

DIVISION: 3M ESPE Dental Products

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

ISSUED: 05/30/2008

SUPERSEDES: 09/07/2007

PRODUCT NAME: 3M ESPE ADPER EASY BOND VIAL

TRADE NAME: 3MÖ ESPEÖ ADPERÖ EASY BOND VIAL

MSDS Manufacturer Number: 23-2856-5

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Specific Use: Dental Adhesive

Intended Use: Dental Product Limitations on Use: For use only by dental professionals.

ADDRESS: 3M Center

ADDRESS CITY: St. Paul,

ADDRESS STATE: MN

ADDRESS ZIP: 55144-1000

BUSINESS PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

MANUFACTURER NAME: 3M

ADDRESS: 3M Center St. Paul, MN 55144-1000

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient NameCAS#Ingredient Percent

(DIMETHYLAMINO)ETHYL METHACRYLATE2867-47-21 - 5 by Weight
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)1565-94-215 - 25 by Weight
2-HYDROXYETHYL METHACRYLATE868-77-915 - 25 by Weight
ETHANOL64-17-510 - 15 by Weight
CAMPHORQUINONE10373-78-11 - 3 by Weight
2,4,6-TRIMETHYLBENZOYLDIPHENYLPHOSPHINE OXIDE75980-60-81 - 3 by Weight
WATER7732-18-510 - 15 by Weight
PHOSPHORIC ACID-6-METHACRYLOXY-HEXYLESTERSMixture5 - 15 by Weight
SILANE TREATED SILICA122334-95-68 - 12 by Weight
1,6-HEXANEDIOL DIMETHACRYLATE6606-59-35 - 10 by Weight
COPOLYMER OF ACRYLIC AND ITACONIC ACID25948-33-81 - 5 by Weight

SECTION 3 - HAZARDS IDENTIFICATION

Odor, Color, Grade: viscous, yellow liquid, characteristic odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. May cause severe eye irritation. May cause allergic skin reaction. May cause target organ effects. . See Section 3.2 for other hazards that can be associated with the ingredients in this product in a non-emergency situation. This document has been prepared in accordance with the US OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending upon the potential for exposure. This product has been evaluated for biocompatibility and determined to be safe for its normal, intended use in patients.

EYE CONTACT: Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

SKIN CONTACT: Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

INHALATION: Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May be absorbed following inhalation and cause target organ effects.

INGESTION: Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. May be absorbed following ingestion and cause target organ effects.

Target Organ Effects: Exposures needed to cause the following health hazard(s) are not expected during normal intended use: Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness. Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Contains a chemical or chemicals which can cause birth defects or other reproductive harm. NOTE: This product contains ethanol. There are data associating human consumption of alcoholic beverages (ethanol) with developmental toxicity. This is not an expected effect during the foreseeable use of this product.

Carcinogenicity: Contains a chemical or chemicals which can cause cancer. NOTE: This product contains ethanol. In IARC published Monograph No. 44, entitled, "Alcohol Drinking", the carcinogenicity of ethanol was determined based on chronic exposure to ethanol through human consumption of alcoholic beverages. This is not an expected effect during the foreseeable use of this product.

Carcinogenicity of Ingredients: ETHANOL: (CAS: 64-17-5; Class Description: Group 1; Regulation: International Agency for Research on Cancer;)

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

SKIN CONTACT: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

INHALATION: Remove person to fresh air. If signs/symptoms develop, get medical attention.

INGESTION: Do not induce vomiting unless instructed to do so by medical

personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.
First Aid Comments: The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

SECTION 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

SPECIAL FIRE FIGHTING PROCEDURES: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

AUTOIGNITION TEMPERATURE: No Data Available

FLASH POINT: 34 deg C [Test Method: Closed Cup]

FLAMMABLE LIMITS - LEL: No Data Available

FLAMMABLE LIMITS - UEL: No Data Available

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line

(1-800-364-3577) for more information on handling and managing the spill.

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice.

Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible. In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7 - HANDLING and STORAGE

HANDLING: Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid static discharge. A no-touch technique is

recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Avoid eye contact. Avoid breathing of vapors. Avoid skin contact. Wash hands after handling and before eating.
STORAGE: Store away from heat. Store out of direct sunlight. Keep container tightly closed.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

EYE PROTECTION: Avoid eye contact. The following eye protection(s) are recommended: Safety Glasses with side shields.

SKIN PROTECTION: Avoid skin contact. See Section 7.1 for more information on skin protection.

RESPIRATORY PROTECTION: Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

Prevention of Swallowing: Do not ingest. Wash hands after handling and before eating.

SOURCE OF EXPOSURE LIMIT DATA: ACGIH: American Conference of Governmental Industrial Hygienists CMRG: Chemical Manufacturer Recommended Guideline OSHA: Occupational Safety and Health Administration AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

Ingredient: ETHANOL

Guideline Type: ACGIH TWA

Guideline Info: 1000 ppm Table A4

Ingredient: ETHANOL

Guideline Type: OSHA TWA

Guideline Info: 1000 ppm Table Z-1

ENGINEERING CONTROLS: Use in a well-ventilated area.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Odor, Color, Grade: viscous, yellow liquid, characteristic odor

General Physical Form: Liquid

Autoignition temperature: No Data Available

Flash Point: 34 deg C [Test Method: Closed Cup]

Flammable Limits - LEL: No Data Available

Flammable Limits - UEL: No Data Available

BOILING POINT: ≥ 78 deg C

DENSITY: 1 - 1.2 g/cm³

VAPOR DENSITY: No Data Available

VAPOR PRESSURE: ≤ 15 mmHg

SPECIFIC GRAVITY: 1 - 1.2 [Ref Std: WATER=1]

pH: Not Applicable

MELTING POINT: No Data Available

SOLUBILITY IN WATER: Appreciable

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Stable.

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID: Heat

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Substance: Carbon monoxide (Condition: During Combustion) Substance: Carbon dioxide (Condition: During Combustion) Substance: Irritant Vapors or Gases (Condition: During Combustion)

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicological Information: Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: Not determined.

CHEMICAL FATE INFORMATION: Not determined.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility. Since regulations vary, consult applicable regulations or authorities before disposal.

EPA Hazardous Waste Number (RCRA): EPA Hazardous Waste Number (RCRA):D001 (Ignitable)

SECTION 14 - TRANSPORT INFORMATION

Transportation Information: ID Number(s): 70-2011-3181-3, 70-2011-3182-1, 70-2011-3245-6 Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15 - REGULATORY INFORMATION

US FEDERAL REGULATIONS: Contact 3M for more information.

311/312 Hazard Categories: Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

STATE REGULATIONS: Contact 3M for more information.

CHEMICAL INVENTORIES: This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA. Contact 3M for more information.

INTERNATIONAL REGULATIONS: Contact 3M for more information.

U.S OSHA: This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16 - ADDITIONAL INFORMATION

Revision Changes: Copyright was modified. Section 3: Other health effects information was modified. Section 3: Immediate other hazard(s) comment was added. Section 14: ID Number Heading Template 1 was added. Section 14: ID Number(s) Template 1 was added. Section 2: Ingredient table was added. Section 8: Exposure guidelines ingredient information was added. Section 8: Exposure guidelines data source legend was added. Section 3: Carcinogenicity table was added. Section 3: Carcinogenicity heading was added.

NFPA - HEALTH: 2

NFPA - FIRE: 2

NFPA - REACTIVITY: 0

NFPA - SPECIAL HAZARDS: None

NFPA AND HMIS COMMENTS: NFPA Explanation: National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be

generated in significant quantities.

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Safety Data Sheet

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Document Group:	23-2856-5	Version Number:	4.00
Issue Date:	06/01/15	Supersedes Date:	05/30/08

SECTION 1: Identification

1.1. Product identifier

3M™ ESPE™ ADPER™ EASY BOND VIAL

Product Identification Numbers

70-2011-3181-3, 70-2011-3182-1, 70-2011-3245-6

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Dental Adhesive

Restrictions on use

For use only by dental professionals.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	3M ESPE Dental Products
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

2.1. Hazard classification

Flammable Liquid: Category 3.

Serious Eye Damage/Irritation: Category 2A.

Skin Corrosion/Irritation: Category 2.

Skin Sensitizer: Category 1B.

Reproductive Toxicity: Category 2.

Specific Target Organ Toxicity (repeated exposure): Category 2.

2.2. Label elements

Signal word

Warning

Symbols

Flame | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Flammable liquid and vapor.

Causes serious eye irritation.

Causes skin irritation.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure:
respiratory system |

Precautionary Statements

Prevention:

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wear protective gloves and eye/face protection.

Wear eye/face protection.

Wear protective gloves.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Response:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:

Store in a well-ventilated place. Keep cool.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

None.

11% of the mixture consists of ingredients of unknown acute oral toxicity.

11% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
2-HYDROXYETHYL METHACRYLATE	868-77-9	15 - 25 Trade Secret *
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	1565-94-2	15 - 25 Trade Secret *
ETHANOL	64-17-5	10 - 15 Trade Secret *
PHOSPHORIC ACIDS-6-METHACRYLOXY-HEXYLESTERS	None	5 - 15 Trade Secret *
WATER	7732-18-5	10 - 15 Trade Secret *
METHACRYLOXYPROPYLTRIMETHOXSILANE	2530-85-0	1 - 10 Trade Secret *
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	1 - 10 Trade Secret *
1,6-HEXANEDIOL DIMETHACRYLATE	6606-59-3	5 - 10 Trade Secret *
(DIMETHYLAMINO)ETHYL METHACRYLATE	2867-47-2	1 - 5 Trade Secret *
COPOLYMER OF ACRYLIC AND ITACONIC ACID	25948-33-8	1 - 5 Trade Secret *
CAMPORQUINONE	10373-78-1	1 - 3 Trade Secret *
2,4,6-TRIMETHYLBENZOYLDIPHENYLPHOSPHINE OXIDE	75980-60-8	1 - 3 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

Rinse mouth. Do not induce vomiting. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with detergent and water. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
SILICA, AMORPHOUS	112945-52-5	OSHA	TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft.	
ETHANOL	64-17-5	ACGIH	STEL:1000 ppm	A3: Confirmed animal carcin.
ETHANOL	64-17-5	OSHA	TWA:1900 mg/m ³ (1000 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls**8.2.1. Engineering controls**

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety Glasses with side shields

Skin/hand protection

See Section 7.1 for additional information on skin protection.

Respiratory protection

None required.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

General Physical Form:	Liquid
Specific Physical Form:	Viscous Liquid
Odor, Color, Grade:	Characteristic odor, yellow
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>No Data Available</i>
Boiling Point	>= 78 °C
Flash Point	34 °C [<i>Test Method:</i> Closed Cup]
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Pressure	<= 15 mmHg
Vapor Density	<i>No Data Available</i>
Density	1 - 1.2 g/cm ³

Specific Gravity	1 - 1.2 [Ref Std: WATER=1]
Solubility in Water	Appreciable
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose

and throat pain.

Skin Contact:

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.
Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Additional Information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE	Ingestion	Rat	LD50 5,564 mg/kg
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
ETHANOL	Dermal	Rabbit	LD50 > 15,800 mg/kg
ETHANOL	Inhalation-Vapor (4 hours)	Rat	LC50 124.7 mg/l
ETHANOL	Ingestion	Rat	LD50 17,800 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Rat	LD50 > 5,110 mg/kg
1,6-HEXANEDIOL DIMETHACRYLATE	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg

1,6-HEXANEDIOL DIMETHACRYLATE	Ingestion	similar compounds	LD50 2000-5000 mg/kg
COPOLYMER OF ACRYLIC AND ITACONIC ACID	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
COPOLYMER OF ACRYLIC AND ITACONIC ACID	Ingestion	Rat	LD50 > 5,000 mg/kg
METHACRYLOXYPROPYLTRIMETHOXYSILANE	Dermal	Rabbit	LD50 > 20,900 mg/kg
METHACRYLOXYPROPYLTRIMETHOXYSILANE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.28 mg/l
METHACRYLOXYPROPYLTRIMETHOXYSILANE	Ingestion	Rat	LD50 > 5,225 mg/kg
(DIMETHYLAMINO)ETHYL METHACRYLATE	Dermal	Rat	LD50 > 2,000 mg/kg
(DIMETHYLAMINO)ETHYL METHACRYLATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.436 mg/l
(DIMETHYLAMINO)ETHYL METHACRYLATE	Ingestion	Rat	LD50 > 2,000 mg/kg
2,4,6-TRIMETHYLBENZOYLDIPHENYLPHOSPHINE OXIDE	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
2,4,6-TRIMETHYLBENZOYLDIPHENYLPHOSPHINE OXIDE	Ingestion	Rat	LD50 > 5,000 mg/kg
CAMPHORQUINONE	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
CAMPHORQUINONE	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
2-HYDROXYETHYL METHACRYLATE	Rabbit	Minimal irritation
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Not available	Minimal irritation
ETHANOL	Rabbit	No significant irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
METHACRYLOXYPROPYLTRIMETHOXYSILANE	Rabbit	No significant irritation
2,4,6-TRIMETHYLBENZOYLDIPHENYLPHOSPHINE OXIDE	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
2-HYDROXYETHYL METHACRYLATE	Rabbit	Moderate irritant
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Not available	Moderate irritant
ETHANOL	Rabbit	Moderate irritant
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
METHACRYLOXYPROPYLTRIMETHOXYSILANE	Rabbit	Mild irritant
2,4,6-TRIMETHYLBENZOYLDIPHENYLPHOSPHINE OXIDE	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
2-HYDROXYETHYL METHACRYLATE	Human and animal	Sensitizing
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Guinea pig	Sensitizing
ETHANOL	Human	Some positive data exist, but the data are not sufficient for classification
Synthetic amorphous silica, fumed, crystalline-free	Human and animal	Not sensitizing
METHACRYLOXYPROPYLTRIMETHOXYSILANE	Guinea	Not sensitizing

pig

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
2-HYDROXYETHYL METHACRYLATE	In vivo	Not mutagenic
2-HYDROXYETHYL METHACRYLATE	In Vitro	Some positive data exist, but the data are not sufficient for classification
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
ETHANOL	In Vitro	Some positive data exist, but the data are not sufficient for classification
ETHANOL	In vivo	Some positive data exist, but the data are not sufficient for classification
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic
METHACRYLOXYPROPYLTRIMETHOXYASILANE	In Vitro	Not mutagenic
METHACRYLOXYPROPYLTRIMETHOXYASILANE	In vivo	Not mutagenic
2,4,6-TRIMETHYLBENZOYLDIPHENYLPHOSPHINE OXIDE	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
ETHANOL	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Synthetic amorphous silica, fumed, crystalline-free	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
2-HYDROXYETHYL METHACRYLATE	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-HYDROXYETHYL METHACRYLATE	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
2-HYDROXYETHYL METHACRYLATE	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Ingestion	Not toxic to female reproduction	Mouse	NOAEL 0.8 mg/kg/day	premating & during gestation
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Ingestion	Not toxic to male reproduction	Mouse	NOAEL 0.8 mg/kg/day	premating & during gestation
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Ingestion	Not toxic to development	Mouse	NOAEL 0.8 mg/kg/day	premating & during gestation
ETHANOL	Inhalation	Not toxic to development	Rat	NOAEL 38 mg/l	during gestation
ETHANOL	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 5,200 mg/kg/day	premating & during gestation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

METHACRYLOXYPROPYLTRIMETHOXYLSILANE	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 5,200 mg/kg/day	during organogenesis
2,4,6-TRIMETHYLBENZOYLDIPHENYLPHOSPHINE OXIDE	Ingestion	Toxic to male reproduction	Rat	NOAEL 100 mg/kg/day	90 days

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
ETHANOL	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 2.6 mg/l	30 minutes
ETHANOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available
ETHANOL	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL not available	
ETHANOL	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 3,000 mg/kg	
COPOLYMER OF ACRYLIC AND ITACONIC ACID	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 5,000 mg/kg	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Ingestion	endocrine system liver nervous system kidney and/or bladder	All data are negative	Mouse	NOAEL 0.8 mg/kg/day	premating & during gestation
ETHANOL	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 124 mg/l	365 days
ETHANOL	Inhalation	hematopoietic system immune system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25 mg/l	14 days
ETHANOL	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
ETHANOL	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 3,000 mg/kg/day	7 days
Synthetic amorphous silica, fumed, crystalline-free	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
METHACRYLOXYPROPYLTRIMETHOXYLSILANE	Dermal	skin	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 2,100 mg/kg/day	17 days
METHACRYLOXYPROPYLTRIMETHOXYLSILANE	Dermal	liver kidney and/or bladder	All data are negative	Rabbit	NOAEL 2,100 mg/kg/day	17 days
METHACRYLOXYPROPYLTRIMETHOXYLSILANE	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.05 mg/l	14 weeks
METHACRYLOXYPROPYLTRIMETHOXYLSILANE	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.244 mg/l	14 weeks
METHACRYLOXYPROPYLTRIMETHOXYLSILANE	Inhalation	hematopoietic system eyes kidney and/or bladder	All data are negative	Rat	NOAEL 0.244 mg/l	14 weeks
2,4,6-TRIMETHYLBENZOYL	Ingestion	skin blood liver kidney and/or	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 1,000	90 days

DIPHENYLPHOSPHINE OXIDE		bladder	classification		mg/kg/day	
2,4,6- TRIMETHYLBENZOYL DIPHENYLPHOSPHINE OXIDE	Ingestion	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	90 days

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D035 (Methyl ethyl ketone)

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information**15.1. US Federal Regulations**

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 3 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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