



## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ ESPE™ SIL  
**MANUFACTURER:** 3M  
**DIVISION:** 3M ESPE Dental Products

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

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

**Issue Date:** 02/09/10  
**Supersedes Date:** 09/05/08

**Document Group:** 16-2848-6

#### Product Use:

Intended Use: Dental Product  
Limitations on Use: For use only by dental professionals  
Specific Use: Dental restorative repair

### SECTION 2: INGREDIENTS

| <u>Ingredient</u>                    | <u>C.A.S. No.</u> | <u>% by Wt</u> |
|--------------------------------------|-------------------|----------------|
| ETHYL ALCOHOL                        | 64-17-5           | > 97           |
| 3-METHACRYLOXYPROPYLTRIMETHOXYSILANE | 2530-85-0         | < 3            |
| METHYL ETHYL KETONE                  | 78-93-3           | < 2            |

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Specific Physical Form:** Liquid

**Odor, Color, Grade:** Clear, colorless with alcohol like 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. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm. .

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.

See Section 3.2 for other hazards that can be associated with the ingredients in this product in a non-emergency situation.

## **3.2 POTENTIAL HEALTH EFFECTS**

### **Eye Contact:**

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

### **Skin Contact:**

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, 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:**

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

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.

**Ingredient**

ETHYL ALCOHOL

**C.A.S. No.**

64-17-5

**Class Description**

Grp. 1: Carcinogenic to humans

**Regulation**

International Agency for Research on Cancer

**SECTION 4: FIRST AID MEASURES****4.1 FIRST AID PROCEDURES**

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

**Skin Contact:** Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

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

**If Swallowed:** 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.

**SECTION 5: FIRE FIGHTING MEASURES****5.1 FLAMMABLE PROPERTIES****Autoignition temperature***No Data Available***Flash Point**12 °C [*Test Method:* Closed Cup]**Flammable Limits - LEL**

3.5 %

**Flammable Limits - UEL**

15 %

**5.2 EXTINGUISHING MEDIA**

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

**5.3 PROTECTION OF FIRE FIGHTERS**

**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. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

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

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Accidental Release Measures:**

Ventilate the area with fresh air. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

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.

Contain spill. 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. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with water. Seal the container.

**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**

### **7.1 HANDLING**

Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. No smoking while handling this material. Avoid contact with oxidizing agents. Avoid eye contact. Avoid prolonged or repeated skin contact.

### **7.2 STORAGE**

Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 ENGINEERING CONTROLS**

Use in an enclosed process area is recommended. Use in a well-ventilated area.

### **8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)**

#### **8.2.1 Eye/Face Protection**

Avoid eye contact.

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

#### **8.2.2 Skin Protection**

Avoid skin contact. Avoid prolonged or repeated skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials. Gloves not normally required.

#### **8.2.3 Respiratory Protection**

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

#### **8.2.4 Prevention of Swallowing**

Not applicable. Do not ingest.

### **8.3 EXPOSURE GUIDELINES**

| <u>Ingredient</u>   | <u>Authority</u> | <u>Type</u> | <u>Limit</u> | <u>Additional Information</u> |
|---------------------|------------------|-------------|--------------|-------------------------------|
| ETHYL ALCOHOL       | ACGIH            | TWA         | 1000 ppm     |                               |
| ETHYL ALCOHOL       | OSHA             | TWA         | 1900 mg/m3   |                               |
| METHYL ETHYL KETONE | ACGIH            | TWA         | 200 ppm      |                               |
| METHYL ETHYL KETONE | ACGIH            | STEL        | 300 ppm      |                               |
| METHYL ETHYL KETONE | OSHA             | TWA         | 590 mg/m3    |                               |

#### 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)

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

|   |   |
|---|---|
| <b>Specific Physical Form:</b>            | Liquid                                  |
| <b>Odor, Color, Grade:</b>                | Clear, colorless with alcohol like odor |
| <b>General Physical Form:</b>             | Liquid                                  |
| <b>Autoignition temperature</b>           | <i>No Data Available</i>                |
| <b>Flash Point</b>                        | 12 °C [ <i>Test Method:</i> Closed Cup] |
| <b>Flammable Limits - LEL</b>             | 3.5 %                                   |
| <b>Flammable Limits - UEL</b>             | 15 %                                    |
| <b>Boiling point</b>                      | 78 °C [ <i>@ 1 atm</i> ]                |
| <b>Density</b>                            | 0.79 - 0.85 [ <i>@ 23 °C</i> ]          |
| <b>Vapor Density</b>                      | >=1.0 [ <i>Ref Std:</i> AIR=1]          |
| <b>Vapor Pressure</b>                     | 45 mmHg [ <i>@ 20 °C</i> ]              |
| <b>Specific Gravity</b>                   | 0.79 - 0.85 [ <i>Ref Std:</i> WATER=1]  |
| <b>pH</b>                                 | <i>Not Applicable</i>                   |
| <b>Melting point</b>                      | Approximately -114 °C                   |
| <b>Solubility in Water</b>                | Complete [ <i>@ 23 °C</i> ]             |
| <b>Evaporation rate</b>                   | <=1.0 [ <i>Ref Std:</i> BUOAC=1]        |
| <b>Volatile Organic Compounds</b>         | 90 %                                    |
| <b>Kow - Oct/Water partition coef</b>     | <i>No Data Available</i>                |
| <b>Percent volatile</b>                   | 95 %                                    |
| <b>VOC Less H2O &amp; Exempt Solvents</b> | <i>No Data Available</i>                |

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

#### Materials and Conditions to Avoid:

##### 10.1 Conditions to avoid

Heat, Sparks and/or flames

##### 10.2 Materials to avoid

Strong oxidizing agents

**Hazardous Polymerization:** Hazardous polymerization will not occur.

### Hazardous Decomposition or By-Products

**Substance**

Carbon monoxide  
Carbon dioxide  
Irritant Vapors or Gases

**Condition**

During Combustion  
During Combustion  
During Combustion

## SECTION 11: 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 Method:** Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

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

Since regulations vary, consult applicable regulations or authorities before disposal.

## SECTION 14: TRANSPORT INFORMATION

**ID Number(s):**  
70-2011-0831-6

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**

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

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.

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

## **SECTION 16: OTHER INFORMATION**

### **NFPA Hazard Classification**

**Health:** 1   **Flammability:** 2   **Reactivity:** 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.

**Reason for Reissue:** The MSDS has been revised because 3M has adopted the 16-section ANSI/ISO format. The potential hazards of the product have not changed. We encourage you to reread the MSDS and review the information.

Revision Changes:

Section 1: Product name was modified.  
Copyright was modified.  
Section 7: Handling information was modified.  
Section 8: Engineering controls information was modified.  
Section 8: Skin protection phrase was modified.  
Section 8: Prevention of swallowing information was modified.  
Page Heading: Product name was modified.  
Section 9: Property description for optional properties was modified.  
Section 8: Exposure guidelines ingredient information was modified.  
Section 3: Carcinogenicity table was modified.  
Section 10.1 Conditions to avoid was added.  
Section 10.2 Materials to avoid was added.  
Section 6: Release measures information was added.  
Section 6: Release measures information was added.  
Section 6: Release measures information was added.  
Section 10: Materials to avoid physical property was added.  
Section 10: Conditions to avoid physical property was added.  
Section 8: Skin/ hand protection phrase was added.  
Section 6: Release measures information was deleted.  
Section 10: Materials and conditions to avoid physical property was deleted.

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