



Safety Data Sheet

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|------------------------|-----------|-------------------------|----------|
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SECTION 1: Identification

1.1. Product identifier

3M™ ESPE™ Scotchbond™ Universal Etchant

Product Identification Numbers

| ID Number | UPC | ID Number | UPC |
|----------------|-----|----------------|-----|
| LE-F100-1014-5 | | LE-F100-1040-4 | |
| 70-2011-3906-3 | | 70-2011-4006-1 | |
| 70-2011-4007-9 | | | |

7000055181, 7000055191, 7100007505

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Etching gel

Restrictions on use

For use only by dental professionals

1.3. Supplier's details

| | |
|----------------------|-----------------------------------------|
| MANUFACTURER: | 3M |
| DIVISION: | Oral Care Solutions Division |
| 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

Corrosive to metal: Category 1.

Serious Eye Damage/Irritation: Category 1.

Skin Corrosion/Irritation: Category 1C.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion |

Pictograms



Hazard Statements

May be corrosive to metals.

Causes severe skin burns and eye damage.

Precautionary Statements

Prevention:

Keep only in original container.

Wear protective gloves, protective clothing, and eye/face protection.

Wash thoroughly after handling.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

Immediately call a POISON CENTER or doctor/physician.

Wash contaminated clothing before reuse.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Absorb spillage to prevent material damage.

Storage:

Store in a corrosive resistant container with a resistant inner liner.

Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified

May cause chemical gastrointestinal burns.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--------------------------------------------------------|-------------|------------------------|
| WATER | 7732-18-5 | 50 - 65 Trade Secret * |
| PHOSPHORIC ACID | 7664-38-2 | 30 - 40 Trade Secret * |
| SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE | 112945-52-5 | 1 - 10 Trade Secret * |

| | | |
|---------------------|------------|----------------------|
| POLYETHYLENE GLYCOL | 25322-68-3 | 1 - 5 Trade Secret * |
| ALUMINUM OXIDE | 1344-28-1 | < 2 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 flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Eye Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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 ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon dioxide

Condition

During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. 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. 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. 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. Clean up residue with water. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid prolonged or repeated skin contact. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Do not get in eyes.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Keep only in original container. Store in a corrosive resistant container with a resistant inner liner. Store away from strong bases.

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. | |
| ALUMINUM OXIDE | 1344-28-1 | OSHA | TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³ | |
| Aluminum, insoluble compounds | 1344-28-1 | ACGIH | TWA(respirable fraction):1 mg/m ³ | A4: Not class. as human carcin |
| POLYETHYLENE GLYCOL | 25322-68-3 | AIHA | TWA(as particulate):10 mg/m ³ | |
| PHOSPHORIC ACID | 7664-38-2 | ACGIH | TWA:1 mg/m ³ ;STEL:3 mg/m ³ | |
| PHOSPHORIC ACID | 7664-38-2 | OSHA | TWA:1 mg/m ³ | |

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: | Gel |
| Odor, Color, Grade: | Slight characteristic odor, Blue |
| Odor threshold | No Data Available |
| pH | < 1 |
| Melting point | Not Applicable |
| Boiling Point | No Data Available |
| Flash Point | > 100 °C [Test Method: Closed Cup] |
| Evaporation rate | No Data Available |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | No Data Available |
| Flammable Limits(UEL) | No Data Available |
| Vapor Pressure | No Data Available |
| Vapor Density | No Data Available |
| Density | 1.1 g/ml - 1.2 g/ml |
| Specific Gravity | 1.1 - 1.2 [Ref Std: WATER=1] |
| Solubility in Water | Complete |
| Solubility- non-water | No Data Available |
| Partition coefficient: n-octanol/ water | No Data Available |
| Autoignition temperature | No Data Available |
| Decomposition temperature | No Data Available |
| Viscosity | No Data Available |
| Molecular weight | No Data Available |
| Volatile Organic Compounds | No Data Available |
| Percent volatile | No Data Available |
| VOC Less H2O & Exempt Solvents | 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

Strong bases

10.6. Hazardous decomposition products**Substance****Condition**

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:

This product may have a characteristic odor; however, no adverse health effects are anticipated.

Skin Contact:

Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:

Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

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 |
| PHOSPHORIC ACID | Dermal | Rabbit | LD50 2,740 mg/kg |
| PHOSPHORIC ACID | Ingestion | Rat | LD50 1,530 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 |
| POLYETHYLENE GLYCOL | Dermal | Rabbit | LD50 > 20,000 mg/kg |
| POLYETHYLENE GLYCOL | Ingestion | Rat | LD50 32,770 mg/kg |
| ALUMINUM OXIDE | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| ALUMINUM OXIDE | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 2.3 mg/l |
| ALUMINUM OXIDE | Ingestion | Rat | LD50 > 5,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|-----------------------------------------------------|---------|---------------------------|
| PHOSPHORIC ACID | Rabbit | Corrosive |
| SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE | Rabbit | No significant irritation |
| POLYETHYLENE GLYCOL | Rabbit | Minimal irritation |
| ALUMINUM OXIDE | Rabbit | No significant irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|-----------------------------------------------------|-------------------------|---------------------------|
| PHOSPHORIC ACID | official classification | Corrosive |
| SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE | Rabbit | No significant irritation |
| POLYETHYLENE GLYCOL | Rabbit | Mild irritant |
| ALUMINUM OXIDE | Rabbit | No significant irritation |

Skin Sensitization

| Name | Species | Value |
|-----------------------------------------------------|------------------|----------------|
| PHOSPHORIC ACID | Human | Not classified |
| SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE | Human and animal | Not classified |
| POLYETHYLENE GLYCOL | Guinea pig | Not classified |

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 |
|-----------------------------------------------------|----------|---------------|
| PHOSPHORIC ACID | In Vitro | Not mutagenic |
| SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE | In Vitro | Not mutagenic |
| POLYETHYLENE GLYCOL | In Vitro | Not mutagenic |
| POLYETHYLENE GLYCOL | In vivo | Not mutagenic |
| ALUMINUM OXIDE | In Vitro | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|------|-------|---------|-------|
|------|-------|---------|-------|

| | | | |
|-----------------------------------------------------|---------------|-------|------------------------------------------------------------------------------|
| SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE | Not Specified | Mouse | Some positive data exist, but the data are not sufficient for classification |
| POLYETHYLENE GLYCOL | Ingestion | Rat | Not carcinogenic |
| ALUMINUM OXIDE | Inhalation | Rat | Not carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|-----------------------------------------------------|---------------|----------------------------------------------------|---------|-------------------------------|----------------------|
| PHOSPHORIC ACID | Ingestion | Not classified for female reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| PHOSPHORIC ACID | Ingestion | Not classified for male reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| PHOSPHORIC ACID | Ingestion | Not classified for development | Rat | NOAEL 750 mg/kg/day | 2 generation |
| SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE | Ingestion | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE | Ingestion | Not classified for development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| POLYETHYLENE GLYCOL | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,125 mg/kg/day | during gestation |
| POLYETHYLENE GLYCOL | Ingestion | Not classified for male reproduction | Rat | NOAEL 5699 +/- 1341 mg/kg/day | 5 days |
| POLYETHYLENE GLYCOL | Not Specified | Not classified for reproduction and/or development | | NOEL N/A | |
| POLYETHYLENE GLYCOL | Ingestion | Not classified for development | Mouse | NOAEL 562 mg/animal/day | during gestation |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---------------------|------------|------------------------|------------------------------------------------------------------------------|---------|---------------------|-----------------------|
| PHOSPHORIC ACID | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| POLYETHYLENE GLYCOL | Inhalation | respiratory irritation | Not classified | Rat | NOAEL 1.008 mg/l | 2 weeks |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|-----------------------------------------------------|------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------|-----------------------|-----------------------|
| SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE | Inhalation | respiratory system silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| POLYETHYLENE GLYCOL | Inhalation | respiratory system | Not classified | Rat | NOAEL 1.008 mg/l | 2 weeks |
| POLYETHYLENE GLYCOL | Ingestion | kidney and/or bladder heart endocrine system hematopoietic system liver nervous system | Not classified | Rat | NOAEL 5,640 mg/kg/day | 13 weeks |
| ALUMINUM OXIDE | Inhalation | pneumoconiosis | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| ALUMINUM OXIDE | Inhalation | pulmonary fibrosis | Not classified | Human | NOAEL Not available | occupational exposure |

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 waste product in a permitted industrial waste facility.

EPA Hazardous Waste Number (RCRA): D002 (Corrosive)

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.

EPCRA 311/312 Hazard Classifications:**Physical Hazards**

Corrosive to metal

Health Hazards

Hazard Not Otherwise Classified (HNOC)

Serious eye damage or eye irritation

Skin Corrosion or Irritation

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient

ALUMINUM OXIDE

C.A.S. No

1344-28-1

% by Wt

Trade Secret < 2

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

Ingredient

ETHYLENE GLYCOL (INGESTED)

C.A.S. No.

107-21-1

Listing

Developmental Toxin

15.3. Chemical Inventories

The components of this product are in compliance with the new substance notification requirements of CEPA.

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: 3 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

Corrosive: Yes

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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