

## SAFETY DATA SHEETS

**This SDS packet was issued with item:**

075038948

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

075038930 079395905 079395910 273005853



## Safety Data Sheet

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 21-0053-5 | <b>Version Number:</b>  | 3.01     |
| <b>Issue Date:</b>     | 09/05/19  | <b>Supersedes Date:</b> | 02/26/15 |

### Product identifier

3M™ ESPE™ VITREBOND PLUS LINER A/B KIT

### ID Number(s):

70-2010-5771-1, 70-2010-5772-9, 70-2010-7709-9, 70-2010-9606-5, 70-2014-0922-7, 70-2014-0924-3

7000054373, 7000054372

### Recommended use

Dental Product, Dental liner/base

### Restrictions on use

For use only by dental professionals

### Supplier's details

|                      |                              |
|----------------------|------------------------------|
| <b>MANUFACTURER:</b> | 3M                           |
| <b>DIVISION:</b>     | Oral Care Solutions Division |

|                   |                                         |
|-------------------|-----------------------------------------|
| <b>ADDRESS:</b>   | 3M Center, St. Paul, MN 55144-1000, USA |
| <b>Telephone:</b> | 1-888-3M HELPS (1-888-364-3577)         |

### Emergency telephone number

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

**This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:**

21-0047-7, 21-0049-3

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**Document Group:** 21-0047-7  
**Issue Date:** 10/14/19

**Version Number:** 7.02  
**Supersedes Date:** 01/22/18

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ VITREBOND™ PLUS LINER LIQUID B

#### Product Identification Numbers

| ID Number      | UPC | ID Number      | UPC |
|----------------|-----|----------------|-----|
| LE-F100-0224-3 |     | LE-F100-0224-4 |     |
| LE-F100-0684-9 |     |                |     |

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Dental product, Liner/base

##### 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

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

Carcinogenicity: Category 2.

#### 2.2. Label elements

**Signal word**

Warning

**Symbols**

Exclamation mark | Health Hazard |

**Pictograms****Hazard Statements**

Causes eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

**Precautionary Statements****Prevention:**

Obtain special instructions before use.

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

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves.

Wash thoroughly after handling.

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

**Response:**

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 ON SKIN: Wash with plenty of soap and water.

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

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

**Storage:**

Store locked up.

**Disposal:**

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

**SECTION 3: Composition/information on ingredients**

| Ingredient                              | C.A.S. No. | % by Wt                |
|-----------------------------------------|------------|------------------------|
| COPOLYMER OF ACRYLIC AND ITACONIC ACIDS | 25948-33-8 | 40 - 50 Trade Secret * |
| WATER                                   | 7732-18-5  | 30 - 40 Trade Secret * |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)      | 868-77-9   | 15 - 25 Trade Secret * |
| ETHYL ACETATE                           | 141-78-6   | < 5 Trade Secret *     |
| DIPHENYLIODONIUM HEXAFLUOROPHOSPHATE    | 58109-40-3 | < 1 Trade Secret *     |
| TETRAHYDROFURAN (THF)                   | 109-99-9   | < 0.2 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 wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

**If Swallowed:**

Rinse mouth. If you feel unwell, get 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 closed container approved for transportation by appropriate authorities. Clean up residue with water. Seal the container. 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**

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 handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. 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. Avoid release to the environment. Wash contaminated clothing before reuse. Do not get in eyes. Use personal protective equipment (gloves, respirators, etc.) as required.

**7.2. Conditions for safe storage including any incompatibilities**

Store away from heat.

**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.

| <b>Ingredient</b>     | <b>C.A.S. No.</b> | <b>Agency</b> | <b>Limit type</b>       | <b>Additional Comments</b>         |
|-----------------------|-------------------|---------------|-------------------------|------------------------------------|
| TETRAHYDROFURAN (THF) | 109-99-9          | ACGIH         | TWA:50 ppm;STEL:100 ppm | A3: Confirmed animal carcin., SKIN |
| TETRAHYDROFURAN (THF) | 109-99-9          | OSHA          | TWA:590 mg/m3(200 ppm)  |                                    |
| ETHYL ACETATE         | 141-78-6          | ACGIH         | TWA:400 ppm             |                                    |
| ETHYL ACETATE         | 141-78-6          | OSHA          | TWA:1400 mg/m3(400 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****Appearance****Physical state**

Liquid

**Color**

Yellow

**Specific Physical Form:**

Liquid

**Odor**

Slight Acrylate

**Odor threshold***No Data Available***pH**

2.5

**Melting point***Not Applicable***Boiling Point***No Data Available***Flash Point**

&gt; 214 °F [Test Method: Closed Cup]

**Evaporation rate***No Data Available***Flammability (solid, gas)**

Not Applicable

**Flammable Limits(LEL)***Not Applicable***Flammable Limits(UEL)***Not Applicable***Vapor Pressure**

&lt;=27 psia [@ 131.0000000000 °F] [Details: MITS data]

**Vapor Density***No Data Available***Density**

1.14 g/ml

**Specific Gravity**

1.14 [Ref Std: WATER=1]

**Solubility in Water**

Complete

**Solubility- non-water***No Data Available***Partition coefficient: n-octanol/ water***Not Applicable***Autoignition temperature***Not Applicable***Decomposition temperature***No Data Available***Viscosity**

200 - 300 centistoke

**Volatile Organic Compounds***Not Applicable***Percent volatile***Not Applicable***VOC Less H2O & Exempt Solvents***Not Applicable***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****Substance**

None known.

**Condition**

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.

May cause additional health effects (see below).

**Skin Contact:**

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**

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

**Ingestion:**

May be harmful if swallowed.

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

May cause additional health effects (see below).

**Additional Health Effects:****Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

| Ingredient            | CAS No.  | Class Description             | Regulation                                  |
|-----------------------|----------|-------------------------------|---------------------------------------------|
| TETRAHYDROFURAN (THF) | 109-99-9 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |

**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 2,000 - 5,000 mg/kg |
| COPOLYMER OF ACRYLIC AND ITACONIC ACIDS | Ingestion                  | Rat                    | LD50 > 5,000 mg/kg                                    |
| COPOLYMER OF ACRYLIC AND ITACONIC ACIDS | Dermal                     | similar health hazards | LD50 estimated to be > 5,000 mg/kg                    |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)      | Dermal                     | Rabbit                 | LD50 > 5,000 mg/kg                                    |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)      | Ingestion                  | Rat                    | LD50 5,564 mg/kg                                      |
| ETHYL ACETATE                           | Dermal                     | Rabbit                 | LD50 > 18,000 mg/kg                                   |
| ETHYL ACETATE                           | Inhalation-Vapor (4 hours) | Rat                    | LC50 70.5 mg/l                                        |
| ETHYL ACETATE                           | Ingestion                  | Rat                    | LD50 5,620 mg/kg                                      |
| DIPHENYLIODONIUM HEXAFLUOROPHOSPHATE    | Ingestion                  | Rat                    | LD50 32 mg/kg                                         |
| TETRAHYDROFURAN (THF)                   | Dermal                     | Rat                    | LD50 > 2,000 mg/kg                                    |
| TETRAHYDROFURAN (THF)                   | Inhalation-Vapor (4 hours) | Rat                    | LC50 54 mg/l                                          |
| TETRAHYDROFURAN (THF)                   | Ingestion                  | Rat                    | LD50 3,180 mg/kg                                      |

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

| Name                                 | Species | Value                     |
|--------------------------------------|---------|---------------------------|
| 2-HYDROXYETHYL METHACRYLATE (HEMA)   | Rabbit  | Minimal irritation        |
| ETHYL ACETATE                        | Rabbit  | Minimal irritation        |
| DIPHENYLIODONIUM HEXAFLUOROPHOSPHATE | Rabbit  | No significant irritation |
| TETRAHYDROFURAN (THF)                | Rabbit  | Minimal irritation        |

### Serious Eye Damage/Irritation

| Name                                 | Species | Value             |
|--------------------------------------|---------|-------------------|
| 2-HYDROXYETHYL METHACRYLATE (HEMA)   | Rabbit  | Moderate irritant |
| ETHYL ACETATE                        | Rabbit  | Mild irritant     |
| DIPHENYLIODONIUM HEXAFLUOROPHOSPHATE | Rabbit  | Mild irritant     |
| TETRAHYDROFURAN (THF)                | Rabbit  | Corrosive         |

### Skin Sensitization

| Name                               | Species          | Value          |
|------------------------------------|------------------|----------------|
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Human and animal | Sensitizing    |
| ETHYL ACETATE                      | Guinea pig       | Not classified |
| TETRAHYDROFURAN (THF)              | Human and animal | 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                                                                        |
|------------------------------------|----------|------------------------------------------------------------------------------|
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | In vivo  | Not mutagenic                                                                |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | In Vitro | Some positive data exist, but the data are not sufficient for classification |

|                                      |          |                                                                              |
|--------------------------------------|----------|------------------------------------------------------------------------------|
| ETHYL ACETATE                        | In Vitro | Not mutagenic                                                                |
| ETHYL ACETATE                        | In vivo  | Not mutagenic                                                                |
| DIPHENYLIODONIUM HEXAFLUOROPHOSPHATE | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| TETRAHYDROFURAN (THF)                | In Vitro | Not mutagenic                                                                |
| TETRAHYDROFURAN (THF)                | In vivo  | Not mutagenic                                                                |

**Carcinogenicity**

| Name                  | Route      | Species                 | Value        |
|-----------------------|------------|-------------------------|--------------|
| TETRAHYDROFURAN (THF) | Inhalation | Multiple animal species | Carcinogenic |

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

| Name                               | Route      | Value                                  | Species | Test Result           | Exposure Duration            |
|------------------------------------|------------|----------------------------------------|---------|-----------------------|------------------------------|
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Ingestion  | Not classified for female reproduction | Rat     | NOAEL 1,000 mg/kg/day | premating & during gestation |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Ingestion  | Not classified for male reproduction   | Rat     | NOAEL 1,000 mg/kg/day | 49 days                      |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Ingestion  | Not classified for development         | Rat     | NOAEL 1,000 mg/kg/day | premating & during gestation |
| TETRAHYDROFURAN (THF)              | Ingestion  | Not classified for female reproduction | Rat     | NOAEL 782 mg/kg/day   | 2 generation                 |
| TETRAHYDROFURAN (THF)              | Ingestion  | Not classified for male reproduction   | Rat     | NOAEL 782 mg/kg/day   | 2 generation                 |
| TETRAHYDROFURAN (THF)              | Ingestion  | Not classified for development         | Rat     | NOAEL 305 mg/kg/day   | 2 generation                 |
| TETRAHYDROFURAN (THF)              | Inhalation | Not classified for development         | Mouse   | NOAEL 1.8 mg/l        | during gestation             |

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

| Name                                    | Route      | Target Organ(s)                   | Value                                                                        | Species       | Test Result          | Exposure Duration |
|-----------------------------------------|------------|-----------------------------------|------------------------------------------------------------------------------|---------------|----------------------|-------------------|
| COPOLYMER OF ACRYLIC AND ITACONIC ACIDS | Ingestion  | nervous system                    | Not classified                                                               | Rat           | NOAEL 5,000 mg/kg    |                   |
| ETHYL ACETATE                           | Inhalation | central nervous system depression | May cause drowsiness or dizziness                                            | Human         | NOAEL Not available  |                   |
| ETHYL ACETATE                           | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human         | NOAEL Not available  |                   |
| ETHYL ACETATE                           | Ingestion  | central nervous system depression | May cause drowsiness or dizziness                                            | Human         | NOAEL Not available  |                   |
| DIPHENYLIODONIUM HEXAFLUOROPHOSPHATE    | Inhalation | respiratory irritation            | Not classified                                                               | Not available | Irritation Equivocal |                   |
| TETRAHYDROFURAN (THF)                   | Inhalation | central nervous system depression | May cause drowsiness or dizziness                                            | Human         | NOAEL Not available  |                   |
| TETRAHYDROFURAN (THF)                   | Inhalation | respiratory irritation            | May cause respiratory irritation                                             |               | NOAEL Not available  |                   |
| TETRAHYDROFURAN (THF)                   | Inhalation | respiratory system                | Not classified                                                               | Rabbit        | NOAEL 2.9 mg/l       | 4 hours           |
| TETRAHYDROFURAN (THF)                   | Ingestion  | central nervous system depression | May cause drowsiness or dizziness                                            | Rat           | NOAEL 180 mg/kg      | not applicable    |

**Specific Target Organ Toxicity - repeated exposure**

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure |
|------|-------|-----------------|-------|---------|-------------|----------|
|------|-------|-----------------|-------|---------|-------------|----------|

|                                         |            |                                                                                                                                                          |                                                                              |        |                       | <b>Duration</b> |
|-----------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------|-----------------------|-----------------|
| COPOLYMER OF ACRYLIC AND ITACONIC ACIDS | Ingestion  | endocrine system   hematopoietic system   liver                                                                                                          | Not classified                                                               | Rat    | NOAEL 200 mg/kg/day   | 28 days         |
| COPOLYMER OF ACRYLIC AND ITACONIC ACIDS | Ingestion  | heart   bone, teeth, nails, and/or hair   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system | Not classified                                                               | Rat    | NOAEL 2,000 mg/kg/day | 28 days         |
| ETHYL ACETATE                           | Inhalation | endocrine system   liver   nervous system                                                                                                                | Not classified                                                               | Rat    | NOAEL 0.043 mg/l      | 90 days         |
| ETHYL ACETATE                           | Inhalation | hematopoietic system                                                                                                                                     | Not classified                                                               | Rabbit | LOAEL 16 mg/l         | 40 days         |
| ETHYL ACETATE                           | Ingestion  | hematopoietic system   liver   kidney and/or bladder                                                                                                     | Not classified                                                               | Rat    | NOAEL 3,600 mg/kg/day | 90 days         |
| TETRAHYDROFURAN (THF)                   | Inhalation | liver                                                                                                                                                    | Some positive data exist, but the data are not sufficient for classification | Rat    | NOAEL 0.6 mg/l        | 12 weeks        |
| TETRAHYDROFURAN (THF)                   | Inhalation | respiratory system                                                                                                                                       | Not classified                                                               | Rat    | NOAEL 2.9 mg/l        | 12 weeks        |
| TETRAHYDROFURAN (THF)                   | Inhalation | kidney and/or bladder                                                                                                                                    | Not classified                                                               | Rat    | NOAEL 0.6 mg/l        | 105 weeks       |
| TETRAHYDROFURAN (THF)                   | Ingestion  | liver                                                                                                                                                    | Some positive data exist, but the data are not sufficient for classification | Rat    | NOAEL Not available   | 2 weeks         |

**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.

As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

**EPA Hazardous Waste Number (RCRA):** Not regulated

**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**

Not applicable

**Health Hazards**

Carcinogenicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

**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:** 1 **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.

**Document Group:** 21-0047-7  
**Issue Date:** 10/14/19

**Version Number:** 7.02  
**Supersedes Date:** 01/22/18

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## Safety Data Sheet

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ VITREBOND™ PLUS LINER PASTE A

#### Product Identification Numbers

| ID Number      | UPC | ID Number      | UPC |
|----------------|-----|----------------|-----|
| LE-F100-0224-5 |     | LE-F100-0224-6 |     |
| LE-F100-0688-2 |     |                |     |

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Dental product, Liner/base

##### 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

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1B.

#### 2.2. Label elements

**Signal word**

**Warning****Symbols**

Exclamation mark |

**Pictograms****Hazard Statements**

Causes eye irritation.

May cause an allergic skin reaction.

**Precautionary Statements****Prevention:**

Wear protective gloves.

Wash thoroughly after handling.

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

**Response:**

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 ON SKIN: Wash with plenty of soap and water.

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

Wash contaminated clothing before reuse.

**Disposal:**

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

**SECTION 3: Composition/information on ingredients**

| <b>Ingredient</b>                                       | <b>C.A.S. No.</b> | <b>% by Wt</b>         |
|---------------------------------------------------------|-------------------|------------------------|
| SILANE-TREATED GLASS                                    | None              | 70 - 80 Trade Secret * |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)                      | 868-77-9          | 10 - 20 Trade Secret * |
| WATER                                                   | 7732-18-5         | 1 - 10 Trade Secret *  |
| SILANE TREATED SILICA                                   | 68909-20-6        | < 2 Trade Secret *     |
| BISPHENOL A DIGLYCIDYL ETHER<br>DIMETHACRYLATE (BISGMA) | 1565-94-2         | < 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 wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

**If Swallowed:**

Rinse mouth. If you feel unwell, get 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**

No special protective actions for fire-fighters are anticipated.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. 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**

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. 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**

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 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.

## 7.2. Conditions for safe storage including any incompatibilities

Store away from heat.

# 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 | 68909-20-6 | OSHA   | TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft. |                     |

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:  | Solid                                    |
| Specific Physical Form: | Paste                                    |
| Odor, Color, Grade:     | Characteristic odor, Off-white to Yellow |
| Odor threshold          | No Data Available                        |
| pH                      | Not Applicable                           |
| Melting point           | No Data Available                        |
| Boiling Point           | Not Applicable                           |
| Flash Point             | Not Applicable                           |

|                                         |                                               |
|-----------------------------------------|-----------------------------------------------|
| Evaporation rate                        | Not Applicable                                |
| Flammability (solid, gas)               | Not Classified                                |
| Flammable Limits(LEL)                   | Not Applicable                                |
| Flammable Limits(UEL)                   | Not Applicable                                |
| Vapor Pressure                          | Not Applicable                                |
| Vapor Density                           | Not Applicable                                |
| Density                                 | 1.9 g/cm3                                     |
| Specific Gravity                        | 1.9 [Ref Std:WATER=1]                         |
| Solubility in Water                     | Negligible                                    |
| Solubility- non-water                   | No Data Available                             |
| Partition coefficient: n-octanol/ water | Not Applicable                                |
| Autoignition temperature                | Not Applicable                                |
| Decomposition temperature               | No Data Available                             |
| Viscosity                               | >=300,000 centistoke [Test Method:Brookfield] |
| Volatile Organic Compounds              | Not Applicable                                |
| Percent volatile                        | Negligible                                    |
| VOC Less H2O & Exempt Solvents          | Not Applicable                                |

## 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

#### 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:

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

##### Eye Contact:

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

##### Ingestion:

May be harmful if swallowed.

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

#### 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 2,000 - 5,000 mg/kg |
| SILANE-TREATED GLASS                                 | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg                    |
| SILANE-TREATED GLASS                                 | Ingestion                      |                        | LD50 estimated to be 2,000 - 5,000 mg/kg              |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)                   | Dermal                         | Rabbit                 | LD50 > 5,000 mg/kg                                    |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)                   | 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              |
| SILANE TREATED SILICA                                | Dermal                         | Rabbit                 | LD50 > 5,000 mg/kg                                    |
| SILANE TREATED SILICA                                | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 0.691 mg/l                                     |
| SILANE TREATED SILICA                                | Ingestion                      | Rat                    | LD50 > 5,110 mg/kg                                    |

ATE = acute toxicity estimate

##### Skin Corrosion/Irritation

| Name                                                 | Species                | Value                     |
|------------------------------------------------------|------------------------|---------------------------|
| SILANE-TREATED GLASS                                 | Professional judgement | No significant irritation |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)                   | Rabbit                 | Minimal irritation        |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Not available          | Minimal irritation        |
| SILANE TREATED SILICA                                | Rabbit                 | No significant irritation |

**Serious Eye Damage/Irritation**

| Name                                                 | Species                | Value                     |
|------------------------------------------------------|------------------------|---------------------------|
| SILANE-TREATED GLASS                                 | Professional judgement | No significant irritation |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)                   | Rabbit                 | Moderate irritant         |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Not available          | Moderate irritant         |
| SILANE TREATED SILICA                                | Rabbit                 | No significant irritation |

**Skin Sensitization**

| Name                                                 | Species          | Value          |
|------------------------------------------------------|------------------|----------------|
| 2-HYDROXYETHYL METHACRYLATE (HEMA)                   | Human and animal | Sensitizing    |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Guinea pig       | Sensitizing    |
| SILANE TREATED SILICA                                | Human and animal | 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                                                                        |
|------------------------------------------------------|----------|------------------------------------------------------------------------------|
| 2-HYDROXYETHYL METHACRYLATE (HEMA)                   | In vivo  | Not mutagenic                                                                |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)                   | 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 |
| SILANE TREATED SILICA                                | In Vitro | Not mutagenic                                                                |

**Carcinogenicity**

| Name                  | Route         | Species | Value                                                                        |
|-----------------------|---------------|---------|------------------------------------------------------------------------------|
| SILANE TREATED SILICA | 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 (HEMA)                   | Ingestion | Not classified for female reproduction | Rat     | NOAEL 1,000 mg/kg/day | prematuring & during gestation |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)                   | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 1,000 mg/kg/day | 49 days                        |
| 2-HYDROXYETHYL METHACRYLATE (HEMA)                   | Ingestion | Not classified for development         | Rat     | NOAEL 1,000 mg/kg/day | prematuring & during gestation |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Ingestion | Not classified for female reproduction | Mouse   | NOAEL 0.8 mg/kg/day   | prematuring & during gestation |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Ingestion | Not classified for male reproduction   | Mouse   | NOAEL 0.8 mg/kg/day   | prematuring & during gestation |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Ingestion | Not classified for development         | Mouse   | NOAEL 0.8 mg/kg/day   | prematuring & during           |

|                       |           |                                        |     |                       |                           |
|-----------------------|-----------|----------------------------------------|-----|-----------------------|---------------------------|
| SILANE TREATED SILICA | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day   | gestation<br>1 generation |
| SILANE TREATED SILICA | Ingestion | Not classified for male reproduction   | Rat | NOAEL 497 mg/kg/day   | 1 generation              |
| SILANE TREATED SILICA | Ingestion | Not classified for development         | Rat | NOAEL 1,350 mg/kg/day | during organogenesis      |

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

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

**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 | Not classified | Mouse   | NOAEL 0.8 mg/kg/day | premating & during gestation |
| SILANE TREATED SILICA                                | Inhalation | respiratory system   silicosis                                    | 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 completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

**EPA Hazardous Waste Number (RCRA):** Not regulated

**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

Not applicable

##### Health Hazards

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

### 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:** 1 **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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