# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document Group:** | 20-3654-9 | **Version Number:** | 6.05 |
| **Issue Date:** | 04/15/15 | **Supercedes Date:** | 02/23/11 |

**Product identifier**
3304/ 3305 3M™ ESPE™ KETAC™ NANO LIGHT-CURE GLASS IONOMER RESTORATIVE KIT

**ID Number(s):**

LE-F100-0193-1, 70-2010-5072-4, 70-2010-5073-2, 70-2010-5074-0, 70-2010-5075-7, 70-2010-5077-3, 70-2010-5712-5, 70-2010-5713-3, 70-2010-5714-1, 70-2010-5715-8, 70-2010-5716-6, 70-2010-5718-2, 70-2010-8549-8

**Recommended use**
Dental product, Dental restorative.
**Restrictions on use**
For use only by dental professionals.

**Supplier's details**

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

**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:**

22-4955-5, 22-4947-2

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may

have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M

**3M USA SDSs are available at www.3M.com**

# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document Group:** | 22-4947-2 | **Version Number:** | 4.00 |
| **Issue Date:** | 05/08/15 | **Supercedes Date:** | 12/23/14 |

## SECTION 1: Identification

**1.1. Product identifier**
3M™ ESPE™ KETAC™ NANO LIGHT-CURE GLASS IONOMER RESTORATIVE PASTE A

**Product Identification Numbers**
LE-F100-0308-8, LE-F100-0354-5, LE-F100-0744-9

**1.2. Recommended use and restrictions on use**

**Recommended use**
Dental product, Restorative
**Restrictions on use**
For use only by dental professionals

**1.3. Supplier's details**

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

**1.4. Emergency telephone number**
1-800-364-3577 or (651) 737-6501 (24 hours)

## SECTION 2: Hazard identification

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

**2.1. Hazard classification**
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.

**2.3. Hazards not otherwise classified**
None.

## SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---|---|---|
| SILANE TREATED GLASS | None | 40 - 55 Trade Secret * |
| SILANE TREATED ZIRCONIA | None | 20 - 30 Trade Secret * |
| POLYETHYLENE GLYCOL DIMETHACRYLATE (PEGDMA) | 25852-47-5 | 5 - 15 Trade Secret * |
| SILANE TREATED SILICA | 248596-91-0 | 5 - 15 Trade Secret * |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | 868-77-9 | 1 - 15 Trade Secret * |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | 1565-94-2 | < 5 Trade Secret * |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | 109-16-0 | < 1 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 | Condition |
|---|---|
| Carbon monoxide | During Combustion |
| Carbon dioxide | 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. 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**
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.

## 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**
No special storage requirements.

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

**Occupational exposure limits**
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

**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:** | Resin odor, Opaque, tooth-colored paste of various shades |
| **Odor threshold** | *No Data Available* |
| **pH** | *Not Applicable* |
| **Melting point** | *No Data Available* |
| **Boiling Point** | *Not Applicable* |
| **Flash Point** | No flash point |
| **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** | 2.11 g/cm3 |

| | |
|---|---|
| **Specific Gravity** | 2.11 [*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** | *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**
Light

**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 |
| SILANE TREATED ZIRCONIA | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| SILANE TREATED ZIRCONIA | Ingestion | Mouse | LD50 > 8,800 mg/kg |
| SILANE TREATED ZIRCONIA | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 4.3 mg/l |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Ingestion | Rat | LD50 5,564 mg/kg |
| SILANE TREATED SILICA | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| SILANE TREATED SILICA | Ingestion | | LD50 estimated to be > 5,000 mg/kg |
| POLYETHYLENE GLYCOL DIMETHACRYLATE (PEGDMA) | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| POLYETHYLENE GLYCOL DIMETHACRYLATE (PEGDMA) | Ingestion | Rat | LD50 > 5,000 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 |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Dermal | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Ingestion | Rat | LD50 10,837 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| SILANE TREATED GLASS | Professional judgement | No significant irritation |
| SILANE TREATED ZIRCONIA | Rabbit | No significant irritation |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Rabbit | Minimal irritation |
| SILANE TREATED SILICA | Professional judgement | No significant irritation |

| | | |
|---|---|---|
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Not available | Minimal irritation |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Guinea pig | Mild irritant |

**Serious Eye Damage/Irritation**

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

**Skin Sensitization**

| Name | Species | Value |
|---|---|---|
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Human and animal | Sensitizing |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Guinea pig | Sensitizing |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Human and animal | Sensitizing |

**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 |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | In Vitro | Some positive data exist, but the data are not sufficient for classification |

**Carcinogenicity**

| Name | Route | Species | Value |
|---|---|---|---|
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Dermal | Mouse | Not carcinogenic |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Ingestion | Not toxic to female reproduction | Rat | NOAEL 1,000 mg/kg/day | premating & during gestation |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Ingestion | Not toxic to male reproduction | Rat | NOAEL 1,000 | 49 days |

| | | | | | |
|---|---|---|---|---|---|
| | | | | mg/kg/day | |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Ingestion | Not toxic to development | Rat | NOAEL 1,000 mg/kg/day | premating & during gestation |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Ingestion | Not toxic to female reproduction | Mouse | NOAEL 0.8 mg/kg/day | premating & during gestation |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Ingestion | Not toxic to male reproduction | Mouse | NOAEL 0.8 mg/kg/day | premating & during gestation |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Ingestion | Not toxic to development | Mouse | NOAEL 0.8 mg/kg/day | premating & during gestation |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Ingestion | Not toxic to female reproduction | Mouse | NOAEL 1 mg/kg/day | 1 generation |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Ingestion | Not toxic to male reproduction | Mouse | NOAEL 1 mg/kg/day | 1 generation |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Ingestion | Not toxic to development | Mouse | NOAEL 1 mg/kg/day | 1 generation |

**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 | All data are negative | Mouse | NOAEL 0.8 mg/kg/day | premating & during gestation |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Dermal | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 833 mg/kg/day | 78 weeks |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Dermal | blood | All data are negative | Mouse | NOAEL 833 mg/kg/day | 78 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.

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.

**311/312 Hazard Categories:**

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

### 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:** | 22-4947-2 | **Version Number:** | 4.00 |
| **Issue Date:** | 05/08/15 | **Supercedes Date:** | 12/23/14 |

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY

OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M

**3M USA SDSs are available at www.3M.com**

# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document Group:** | 22-4955-5 | **Version Number:** | 3.00 |
| **Issue Date:** | 12/22/14 | **Supercedes Date:** | 10/26/09 |

## SECTION 1: Identification

**1.1. Product identifier**
3M™ ESPE™ KETAC™ NANO LIGHT-CURE GLASS IONOMER RESTORATIVE PASTE B

**Product Identification Numbers**
LE-F100-0309-0, LE-F100-0354-6, LE-F100-0745-1

**1.2. Recommended use and restrictions on use**

**Recommended use**
Dental product, Restorative
**Restrictions on use**
For use only by dental products.

**1.3. Supplier's details**

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

**1.4. Emergency telephone number**
1-800-364-3577 or (651) 737-6501 (24 hours)

## SECTION 2: Hazard identification

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

**2.1. Hazard classification**
Acute Toxicity (oral): Category 4.
Skin Sensitizer: Category 1.

**2.2. Label elements**
**Signal word**
Warning

**Symbols**
Exclamation mark |

**Pictograms**

**Hazard Statements**
Harmful if swallowed.
May cause an allergic skin reaction.

**Precautionary Statements**

**Prevention:**
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

**Response:**
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.
Rinse mouth.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

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

**2.3. Hazards not otherwise classified**
None.

## SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---|---|---|
| SILANE TREATED CERAMIC | 444758-98-9 | 40 - 60 Trade Secret * |
| COPOLYMER OF ACRYLIC AND ITACONIC ACIDS | 25948-33-8 | 20 - 30 Trade Secret * |
| WATER | 7732-18-5 | 10 - 20 Trade Secret * |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | 868-77-9 | 1 - 10 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**
Material will not burn.

**5.2. Special hazards arising from the substance or mixture**
None inherent in this product.

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| Carbon monoxide | During Combustion |
| Carbon dioxide | 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**
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.

## 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. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

**7.2. Conditions for safe storage including any incompatibilities**
No special storage requirements.

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

**Occupational exposure limits**
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

**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:** | Resin odor, Opaque, 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** | 1.66 g/cm3 |
| **Specific Gravity** | 1.66 [*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** | *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**
None known.

**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:**
Contact with the eyes during product use is not expected to result in significant irritation.

**Ingestion:**
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 | Ingestion | | No data available; calculated ATE 300 - 2,000 mg/kg |
| SILANE TREATED CERAMIC | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| SILANE TREATED CERAMIC | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| COPOLYMER OF ACRYLIC AND ITACONIC ACIDS | Dermal | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| COPOLYMER OF ACRYLIC AND ITACONIC ACIDS | Ingestion | Rat | LD50 > 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 |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| SILANE TREATED CERAMIC | similar compounds | No significant irritation |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Rabbit | Minimal irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| SILANE TREATED CERAMIC | similar compounds | Mild irritant |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Rabbit | Moderate irritant |

**Skin Sensitization**

| Name | Species | Value |
|---|---|---|
| SILANE TREATED CERAMIC | similar compounds | Some positive data exist, but the data are not sufficient for classification |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Human and animal | Sensitizing |

**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 |

**Carcinogenicity**

| Name | Route | Species | Value |
|---|---|---|---|
| SILANE TREATED CERAMIC | Inhalation | similar compounds | 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 toxic to female reproduction | Rat | NOAEL 1,000 mg/kg/day | premating & during gestation |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Ingestion | Not toxic to male reproduction | Rat | NOAEL 1,000 mg/kg/day | 49 days |
| 2-HYDROXYETHYL METHACRYLATE (HEMA) | Ingestion | Not toxic to development | Rat | NOAEL 1,000 mg/kg/day | premating & 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 | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 5,000 mg/kg | |

**Specific Target Organ Toxicity - repeated exposure**

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| SILANE TREATED CERAMIC | Inhalation | pulmonary fibrosis | Some positive data exist, but the data are not sufficient for classification | similar compounds | NOAEL Not available | |

**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.

**311/312 Hazard Categories:**

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

### 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:** 0 **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:** | 22-4955-5 | **Version Number:** | 3.00 |
| **Issue Date:** | 12/22/14 | **Supercedes Date:** | 10/26/09 |

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to

determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M

**3M USA SDSs are available at www.3M.com**