



**3M General Offices**  
3M Center  
St. Paul, MN 55144-1000  
1-800-364-3577 or (651) 737-6501 (24 hours)

## Safety Data Sheet

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Purchase Order #: 900329  
Customer Number: 0020351632

SDS Coordinator  
DHPI DHP  
STE 100 GILLINGHAM LN 1631  
SUGAR LAND, TX 77478-2984  
USA

Dear SDS Coordinator

Enclosed is the Safety Data Sheet (SDS)\* for the product that your company recently purchased from 3M.

Please forward the attached document(s) to the individual in your organization responsible for hazard communication.

If you are a distributor and resell this product, OSHA and EPA require that you transmit this SDS information to your customers at the time of first shipment or whenever you receive revised SDSs from 3M.

3M SDSs are available over the Internet at [www.3m.com/MSDSSearch](http://www.3m.com/MSDSSearch).

3M is committed to meeting our customer requirements. Please contact your 3M customer service or sales representative if you have any questions. If you do not know whom to contact, please call the 3M Product Information Center at 1-800-364-3577.

**If you are not currently receiving 3M SDSs by e-mail and would like to do so, please contact our eSDS Administrator at [emsdsadmin@mmm.com](mailto:emsdsadmin@mmm.com)**

\*An Article Information Sheet (AIS) or Article Information Letter (AIL) may be enclosed in place of an SDS if the product is an article which does not require an SDS under the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.



## Safety Data Sheet

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**Document Group:** 29-1348-1  
**Issue Date:** 11/15/22

**Version Number:** 4.04  
**Supersedes Date:** 06/11/21

### SECTION 1: Identification

#### 1.1. Product identifier

Paradigm™ Nano Hybrid Universal Restorative

#### Product Identification Numbers

LE-F100-0922-4, LE-F100-0922-5, 70-2010-7953-3, 70-2010-7954-1, 70-2010-7955-8, 70-2010-7956-6, 70-2010-7957-4, 70-2010-7958-2, 70-2010-7959-0, 70-2010-7960-8, 70-2010-7961-6, 70-2010-7962-4, 70-2010-7963-2, 70-2010-7964-0, 70-2010-7965-7, 70-2010-7966-5, 70-2010-7967-3, 70-2010-7968-1, 70-2010-7969-9, 70-2010-7970-7, 70-2010-7971-5, 70-2010-7972-3, 70-2010-7973-1, 70-2010-7974-9, 70-2010-7975-6, 70-2010-7976-4, 70-2010-7977-2, 70-2010-8548-0, 70-2010-9819-4, 70-2010-9820-2, 70-2010-9821-0, 70-2010-9822-8, 70-2010-9823-6, 70-2010-9824-4, 70-2010-9825-1, 70-2010-9826-9, 70-2010-9827-7, 70-2010-9828-5, 70-2010-9829-3, 70-2010-9830-1, 70-2010-9831-9, 70-2010-9832-7, 70-2010-9833-5, 70-2010-9834-3, 70-2010-9835-0, 70-2010-9836-8, 70-2010-9837-6, 70-2010-9838-4, 70-2010-9839-2, 70-2010-9840-0, 70-2010-9841-8, 70-2010-9842-6, 70-2010-9843-4, 7000128944, 7000128945, 7000128946, 7000128947, 7000128948, 7000128949, 7000128950, 7000128952, 7000128951, 7000128953, 7000128954, 7000128955, 7000128956, 7000128957, 7000128958, 7000128959, 7000128960, 7000128961, 7000128962, 7000128963, 7000128964, 7000128965, 7000128966, 7000128942, 7000128943, 7010344082, 7010388829, 7100111725, 7010388830, 7010302373, 7010388831, 7010342960, 7100111731, 7010317435, 7010388833, 7010342961, 7010296478, 7010388834, 7010342962, 7010388835, 7010317436, 7010388836, 7100111739, 7010302374, 7010388837, 7100111740, 7010388838, 7010317437, 7010388839, 7010342965, 7010291771

#### 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:** 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

Skin Sensitizer: Category 1.

## 2.2. Label elements

### Signal word

Warning

### Symbols

Exclamation mark |

### Pictograms



### Hazard Statements

May cause an allergic skin reaction.

### Precautionary Statements

#### Prevention:

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

Wear protective gloves.

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.

#### 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                |
|------------------------------------------------------------------|-------------|------------------------|
| Silane Treated Ceramic                                           | 444758-98-9 | 70 - 85 Trade Secret * |
| Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)             | 1565-94-2   | 1 - 10 Trade Secret *  |
| Diurethane Dimethacrylate (UDMA)                                 | 72869-86-4  | 1 - 10 Trade Secret *  |
| Silane Treated Silica                                            | 248596-91-0 | 1 - 10 Trade Secret *  |
| Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISMA-6) | 41637-38-1  | 1 - 10 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

Allergic skin reaction (redness, swelling, blistering, and itching).

### 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

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. 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. Wash contaminated clothing before reuse. Do not get in eyes.

### 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

#### Appearance

##### Physical state

Solid

##### Color

Tooth

#### Specific Physical Form:

Paste

#### Odor

Slight Acrylate

#### 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)                   | <i>Not Applicable</i>    |
| Flammable Limits(UEL)                   | <i>Not Applicable</i>    |
| Vapor Pressure                          | <i>Not Applicable</i>    |
| Vapor Density                           | <i>Not Applicable</i>    |
| Density                                 | 2.1 g/cm3                |
| Specific Gravity                        | 2.1 [Ref Std:WATER=1]    |
| Solubility in Water                     | Negligible               |
| Solubility- non-water                   | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>Not Applicable</i>    |
| Autoignition temperature                | <i>No Data Available</i> |
| Decomposition temperature               | <i>No Data Available</i> |
| Viscosity                               | <i>No Data Available</i> |
| Molecular weight                        | <i>No Data Available</i> |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

### 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

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
|------------------|------------------|

|             |  |
|-------------|--|
| None known. |  |
|-------------|--|

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

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

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

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

**Inhalation:**

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:**

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                                                  | Ingestion |                       | No data available; calculated ATE >2,000 - =5,000 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                |
| Silane Treated Silica                                            | Dermal    |                       | LD50 estimated to be > 5,000 mg/kg                      |
| Silane Treated Silica                                            | Ingestion |                       | LD50 estimated to be > 5,000 mg/kg                      |
| Diurethane Dimethacrylate (UDMA)                                 | Dermal    | Professional judgment | LD50 estimated to be > 5,000 mg/kg                      |
| Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISMA-6) | Dermal    | Rat                   | LD50 > 2,000 mg/kg                                      |
| Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISMA-6) | Ingestion | Rat                   | LD50 > 35,000 mg/kg                                     |
| Diurethane Dimethacrylate (UDMA)                                 | Ingestion | Rat                   | LD50 > 5,000 mg/kg                                      |
| Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)             | Dermal    | Professional judgment | LD50 estimated to be > 5,000 mg/kg                      |
| Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)             | Ingestion | Rat                   | LD50 > 11,700 mg/kg                                     |
| Triethylene Glycol Dimethacrylate (TEGDMA)                       | Dermal    | Professional judgment | 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 Ceramic | similar compounds     | No significant irritation |
| Silane Treated Silica  | Professional judgment | No significant irritation |

|                                                                  |            |                           |
|------------------------------------------------------------------|------------|---------------------------|
| Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISMA-6) | Rabbit     | Minimal irritation        |
| Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)             | Rabbit     | No significant irritation |
| Triethylene Glycol Dimethacrylate (TEGDMA)                       | Guinea pig | Mild irritant             |

**Serious Eye Damage/Irritation**

| Name                                                             | Species                | Value                     |
|------------------------------------------------------------------|------------------------|---------------------------|
| Silane Treated Ceramic                                           | similar compounds      | Mild irritant             |
| Silane Treated Silica                                            | Professional judgement | No significant irritation |
| Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISMA-6) | Rabbit                 | No significant irritation |
| Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)             | In vitro data          | No significant irritation |
| Triethylene Glycol Dimethacrylate (TEGDMA)                       | Professional judgement | Moderate irritant         |

**Skin Sensitization**

| Name                                                             | Species           | Value          |
|------------------------------------------------------------------|-------------------|----------------|
| Silane Treated Ceramic                                           | similar compounds | Not classified |
| Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISMA-6) | Guinea pig        | Not classified |
| Diurethane Dimethacrylate (UDMA)                                 | Guinea pig        | Sensitizing    |
| Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)             | Mouse             | Not classified |
| 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                                                                        |
|------------------------------------------------------------------|----------|------------------------------------------------------------------------------|
| Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISMA-6) | In Vitro | Not mutagenic                                                                |
| Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA)             | In Vitro | Not mutagenic                                                                |
| Triethylene Glycol Dimethacrylate (TEGDMA)                       | 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 |
| Triethylene Glycol Dimethacrylate (TEGDMA) | Dermal     | Mouse             | Not carcinogenic                                                             |

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

| Name                                                 | Route     | Value                          | Species | Test Result           | Exposure Duration |
|------------------------------------------------------|-----------|--------------------------------|---------|-----------------------|-------------------|
| Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA) | Ingestion | Not classified for development | Rat     | NOAEL 1,000 mg/kg/day | during gestation  |



|                                            |           |                                        |       |                   |              |
|--------------------------------------------|-----------|----------------------------------------|-------|-------------------|--------------|
| Triethylene Glycol Dimethacrylate (TEGDMA) | Ingestion | Not classified for female reproduction | Mouse | NOAEL 1 mg/kg/day | 1 generation |
| Triethylene Glycol Dimethacrylate (TEGDMA) | Ingestion | Not classified for male reproduction   | Mouse | NOAEL 1 mg/kg/day | 1 generation |
| Triethylene Glycol Dimethacrylate (TEGDMA) | Ingestion | Not classified for 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 |
|------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------|-----------------------|-------------------|
| Silane Treated Ceramic                               | Inhalation | pulmonary fibrosis                                                                                                                                                                                                                         | Not classified | similar compounds | NOAEL Not available   |                   |
| Bisphenol A Diglycidyl Ether Dimethacrylate (BISGMA) | Ingestion  | endocrine system   hematopoietic system   liver   heart   skin   gastrointestinal tract   bone, teeth, nails, and/or hair   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system | Not classified | Rat               | NOAEL 1,000 mg/kg/day | 90 days           |
| Triethylene Glycol Dimethacrylate (TEGDMA)           | Dermal     | kidney and/or bladder   blood                                                                                                                                                                                                              | Not classified | 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 waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

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

#### Additional TSCA Information

| Components            | CAS No      | Additional Information            |
|-----------------------|-------------|-----------------------------------|
| Silane Treated Silica | 248596-91-0 | Allowed use(s): Coating additive. |

### 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: | 29-1348-1 | Version Number:  | 4.04     |
| Issue Date:     | 11/15/22  | Supersedes Date: | 06/11/21 |

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