



## Safety Data Sheet

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|                        |           |                         |          |
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### Product identifier

3M™ ESPE™ RelyX Unicem 2 Automix Value Pack

### ID Number(s):

70-2011-3636-6, 70-2011-3660-6, 70-2011-4027-7, 70-2011-4028-5, 70-2011-4029-3

### Recommended use

Dental Product, Dental Cement

### Restrictions on use

For use only by dental professionals.

### Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | 3M ESPE Dental Products                 |
| <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:**

28-1380-6, 28-1333-5

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| <b>Issue Date:</b>     | 09/07/15  | <b>Supersedes Date:</b> | 03/19/15 |

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RelyX™ UNICEM 2 AUTOMIX Base Paste

#### Product Identification Numbers

LE-F100-0787-3, LE-F100-0787-4

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

##### Recommended use

Dental Product, Cement

##### Restrictions on use

For use only by dental professionals.

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | 3M ESPE Dental Products                 |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA |
| <b>Telephone:</b>    | 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:**

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.

**2.3. Hazards not otherwise classified**

None.

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

| Ingredient  | C.A.S. No.   | % by Wt                |
|---|--------------|------------------------|
| Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material | None         | 45 - 55 Trade Secret * |
| 2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE                | 1224866-76-5 | 20 - 30 Trade Secret * |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)  | 109-16-0     | 10 - 20 Trade Secret * |
| SILANE TREATED SILICA   | 68909-20-6   | 1 - 10 Trade Secret *  |
| SODIUM PERSULFATE   | 7775-27-1    | < 3 Trade Secret *     |
| OXIDE GLASS CHEMICALS (non-fibrous)   | 65997-17-3   | < 3 Trade Secret *     |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE  | 13122-18-4   | < 0.5 Trade Secret *   |
| Acetic acid, copper(2+) salt, monohydrate   | 6046-93-1    | < 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

Carbon monoxide

Carbon dioxide

Irritant Vapors or Gases

Condition

During Combustion

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. 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 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.

### 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 |
|-------------------------------------|------------|-------------------------|---|---------------------|
| COPPER COMPOUNDS                    | 6046-93-1  | ACGIH                   | TWA(as Cu dust or mist):1 mg/m <sup>3</sup> ;TWA(as Cu, fume):0.2 mg/m <sup>3</sup> |                     |
| OXIDE GLASS CHEMICALS (non-fibrous) | 65997-17-3 | Manufacturer determined | TWA(as dust):10 mg/m <sup>3</sup>   |                     |
| SILICA, AMORPHOUS                   | 68909-20-6 | OSHA                    | TWA concentration:0.8 mg/m <sup>3</sup> ;TWA:20 millions of particles/cu. ft.       |                     |
| PERSULFATE COMPOUNDS                | 7775-27-1  | ACGIH                   | TWA(as persulfate):0.1 mg/m <sup>3</sup>  |                     |

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:                     | toothcolored paste with slight acrylic odor |
| Odor threshold                          | <i>No Data Available</i>                    |
| pH                                      | <i>Not Applicable</i>                       |
| Melting point                           | <i>No Data Available</i>                    |
| Boiling Point                           | <i>No Data Available</i>                    |
| Flash Point                             | No flash point                              |
| Evaporation rate                        | <i>No Data Available</i>                    |
| Flammability (solid, gas)               | Not Classified                              |
| Flammable Limits(LEL)                   | <i>No Data Available</i>                    |
| Flammable Limits(UEL)                   | <i>No Data Available</i>                    |
| Vapor Pressure                          | <i>No Data Available</i>                    |
| Vapor Density                           | <i>No Data Available</i>                    |
| Density                                 | 2 - 2.2 g/cm <sup>3</sup>                   |
| Specific Gravity                        | 2 - 2.2 [Ref Std: WATER=1]                  |
| Solubility in Water                     | Negligible                                  |
| Solubility- non-water                   | <i>No Data Available</i>                    |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i>                    |
| Autoignition temperature                | <i>No Data Available</i>                    |
| Decomposition temperature               | <i>No Data Available</i>                    |
| Viscosity                               | <i>No Data Available</i>                    |
| Percent volatile                        | <i>No Data Available</i>                    |

## 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

| <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:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. 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                                    |
|---|--------------------------------|------------------------|--|
| Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg       |
| Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material | Ingestion                      |                        | LD50 estimated to be 2,000 - 5,000 mg/kg |
| 2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE                | Ingestion                      | Rat                    | LD50 > 2,000 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                        |
| 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                       |
| OXIDE GLASS CHEMICALS (non-fibrous)   | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg       |



|  |                                |        |  |
|--|--------------------------------|--------|--|
| OXIDE GLASS CHEMICALS (non-fibrous)        | Ingestion                      |        | LD50 estimated to be 2,000 - 5,000 mg/kg |
| SODIUM PERSULFATE                          | Dermal                         | Rabbit | LD50 > 10,000 mg/kg                      |
| SODIUM PERSULFATE                          | Inhalation-Dust/Mist (4 hours) | Rat    | LC50 > 47.93 mg/l                        |
| SODIUM PERSULFATE                          | Ingestion                      | Rat    | LD50 895 mg/kg                           |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE | Dermal                         | Rat    | LD50 > 2,000 mg/kg                       |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE | Inhalation-Dust/Mist (4 hours) | Rat    | LC50 > 0.8 mg/l                          |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE | Ingestion                      | Rat    | LD50 12,905 mg/kg                        |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name  | Species                | Value                     |
|---|------------------------|---------------------------|
| Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material | Professional judgement | No significant irritation |
| 2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE                | Rabbit                 | Minimal irritation        |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)  | Guinea pig             | Mild irritant             |
| SILANE TREATED SILICA   | Rabbit                 | No significant irritation |
| OXIDE GLASS CHEMICALS (non-fibrous)   | Professional judgement | No significant irritation |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE  | Rabbit                 | No significant irritation |

**Serious Eye Damage/Irritation**

| Name  | Species                | Value                     |
|---|------------------------|---------------------------|
| Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material | Professional judgement | No significant irritation |
| 2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE                | Rabbit                 | Corrosive                 |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)  | Professional judgement | Moderate irritant         |
| SILANE TREATED SILICA   | Rabbit                 | No significant irritation |
| OXIDE GLASS CHEMICALS (non-fibrous)   | Professional judgement | No significant irritation |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE  | Rabbit                 | No significant irritation |

**Skin Sensitization**

| Name   | Species          | Value           |
|--|------------------|-----------------|
| 2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE | Guinea pig       | Not sensitizing |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)   | Human and animal | Sensitizing     |
| SILANE TREATED SILICA  | Human and animal | Not sensitizing |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE   | Guinea           | Sensitizing     |

|  |     |  |
|--|-----|--|
|  | pig |  |
|--|-----|--|

**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-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE | In Vitro | Not mutagenic  |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)   | 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  |
|--|---------------|---------|--|
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Dermal        | Mouse   | Not carcinogenic   |
| 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    |
|--|-----------|----------------------------------|---------|-----------------------|----------------------|
| 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         |
| SILANE TREATED SILICA                      | Ingestion | Not toxic to female reproduction | Rat     | NOAEL 509 mg/kg/day   | 1 generation         |
| SILANE TREATED SILICA                      | Ingestion | Not toxic to male reproduction   | Rat     | NOAEL 497 mg/kg/day   | 1 generation         |
| SILANE TREATED SILICA                      | Ingestion | Not toxic to 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     |
|--|------------|--------------------------------|--|---------|---------------------|-----------------------|
| 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              |
| SILANE TREATED SILICA                      | Inhalation | respiratory system   silicosis | All data are negative  | 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.

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.

#### 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: 1 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.

|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 28-1380-6 | <b>Version Number:</b>  | 4.00     |
| <b>Issue Date:</b>     | 09/07/15  | <b>Supercedes Date:</b> | 03/19/15 |

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RelyX™ UNICEM 2 AUTOMIX CATALYST

#### Product Identification Numbers

LE-F100-0785-6, LE-F100-0785-9

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

##### Recommended use

Dental Product, Cement

##### Restrictions on use

For use only by dental professionals.

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | 3M ESPE Dental Products                 |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA |
| <b>Telephone:</b>    | 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 2A.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark |

### Pictograms



### Hazard Statements

Causes serious eye irritation.  
May cause an allergic skin reaction.

### Precautionary Statements

#### Prevention:

Wear eye/face protection.  
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                |
|--|-------------|------------------------|
| Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material | None        | 50 - 70 Trade Secret * |
| SUBSTITUTED DIMETHACRYLATE   | 27689-12-9  | 10 - 30 Trade Secret * |
| 2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)   | 945012-02-2 | < 5 Trade Secret *     |
| 1,12-DODECANE DIMETHYCRYLATE   | 72829-09-5  | < 5 Trade Secret *     |
| SILANE TREATED SILICA  | 68909-20-6  | < 5 Trade Secret *     |
| SODIUM P-TOLUENESULFINATE  | 824-79-3    | < 5 Trade Secret *     |
| 2-Propenoic acid, 2-methyl-, [(3-methoxypropyl)imino]di-2,1-ethanediyl ester   | 93962-71-1  | < 2 Trade Secret *     |
| CALCIUM HYDROXIDE  | 1305-62-0   | < 2 Trade Secret *     |
| Methacrylated Amine  | 93962-70-0  | < 0.5 Trade Secret *   |
| NUC - Titanium Dioxide   | 13463-67-7  | < 0.5 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:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. 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

| <u>Substance</u>         | <u>Condition</u>  |
|--------------------------|-------------------|
| Carbon monoxide          | During Combustion |
| Carbon dioxide           | During Combustion |
| Irritant Vapors or Gases | 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

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            |
|------------------------|------------|--------|---|--------------------------------|
| CALCIUM HYDROXIDE      | 1305-62-0  | ACGIH  | TWA:5 mg/m <sup>3</sup>   |                                |
| CALCIUM HYDROXIDE      | 1305-62-0  | OSHA   | TWA(as total dust):15 mg/m <sup>3</sup> ;TWA(respirable fraction):5 mg/m <sup>3</sup> |                                |
| NUC - Titanium Dioxide | 13463-67-7 | ACGIH  | TWA:10 mg/m <sup>3</sup>  | A4: Not class. as human carcin |
| NUC - Titanium Dioxide | 13463-67-7 | CMRG   | TWA(as respirable dust):5 mg/m <sup>3</sup>   |                                |
| NUC - Titanium Dioxide | 13463-67-7 | OSHA   | TWA(as total dust):15 mg/m <sup>3</sup>   |                                |
| SILICA, AMORPHOUS      | 68909-20-6 | OSHA   | TWA concentration:0.8 mg/m <sup>3</sup> ;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**

|  |   |
|--|---|
| <b>General Physical Form:</b>                  | Solid   |
| <b>Specific Physical Form:</b>                 | Paste   |
| <b>Odor, Color, Grade:</b>                     | tooth-colored pastes with slight acrylic odor |
| <b>Odor threshold</b>                          | <i>No Data Available</i>                      |
| <b>pH</b>                                      | <i>Not Applicable</i>                         |
| <b>Melting point</b>                           | <i>No Data Available</i>                      |
| <b>Boiling Point</b>                           | <i>No Data Available</i>                      |
| <b>Flash Point</b>                             | No flash point                                |
| <b>Evaporation rate</b>                        | <i>No Data Available</i>                      |
| <b>Flammability (solid, gas)</b>               | Not Classified                                |
| <b>Flammable Limits(LEL)</b>                   | <i>No Data Available</i>                      |
| <b>Flammable Limits(UEL)</b>                   | <i>No Data Available</i>                      |
| <b>Vapor Pressure</b>                          | <i>No Data Available</i>                      |
| <b>Vapor Density</b>                           | <i>No Data Available</i>                      |
| <b>Density</b>                                 | 2 - 2.2 g/cm <sup>3</sup>                     |
| <b>Specific Gravity</b>                        | 2 - 2.2 [Ref Std: WATER=1]                    |
| <b>Solubility in Water</b>                     | Nil   |
| <b>Solubility- non-water</b>                   | <i>No Data Available</i>                      |
| <b>Partition coefficient: n-octanol/ water</b> | <i>No Data Available</i>                      |
| <b>Autoignition temperature</b>                | <i>No Data Available</i>                      |
| <b>Decomposition temperature</b>               | <i>No Data Available</i>                      |
| <b>Viscosity</b>                               | <i>No Data Available</i>                      |
| <b>Percent volatile</b>                        | <i>No Data Available</i>                      |

**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**

| <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:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

#### Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

#### Ingestion:

May be harmful if swallowed.

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

#### Additional Health Effects:

#### Carcinogenicity:

Exposures needed to cause the following health effect(s) are not expected during normal, intended use:

Contains a chemical or chemicals which can cause cancer.

| Ingredient             | CAS No.    | Class Description             | Regulation                                  |
|------------------------|------------|-------------------------------|---|
| NUC - Titanium Dioxide | 13463-67-7 | 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                                    |
|---|--------------------------------|------------------------|--|
| Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg       |
| Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material | Ingestion                      |                        | LD50 estimated to be 2,000 - 5,000 mg/kg |
| SUBSTITUTED DIMETHACRYLATE  | Dermal                         | Professional judgement | LD50 estimated to be > 5,000 mg/kg       |
| SUBSTITUTED DIMETHACRYLATE  | Ingestion                      | Rat                    | LD50 > 17,600 mg/kg                      |
| 1,12-DODECANE DIMETHACRYLATE  | Dermal                         | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg |
| 1,12-DODECANE DIMETHACRYLATE  | Ingestion                      | similar compounds      | LD50 2000-5000 mg/kg                     |
| 2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)  | Dermal                         | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg |
| 2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1)  | Ingestion                      | Rat                    | LD50 > 2,000 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                       |
| SODIUM P-TOLUENESULFINATE   | Dermal                         | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg |
| SODIUM P-TOLUENESULFINATE   | Ingestion                      | Rat                    | LD50 3,200 mg/kg                         |
| CALCIUM HYDROXIDE   | Dermal                         | Rabbit                 | LD50 > 2,500 mg/kg                       |
| CALCIUM HYDROXIDE   | Ingestion                      | Rat                    | LD50 7,340 mg/kg                         |
| 2-Propenoic acid, 2-methyl-, [(3-methoxypropyl)imino]di-2,1-ethanediyl ester  | Dermal                         | Professional judgement | LD50 estimated to be > 5,000 mg/kg       |
| 2-Propenoic acid, 2-methyl-, [(3-methoxypropyl)imino]di-2,1-ethanediyl ester  | Ingestion                      | Rat                    | LD50 > 1,600 mg/kg                       |
| NUC - Titanium Dioxide  | Dermal                         | Rabbit                 | LD50 > 10,000 mg/kg                      |
| NUC - Titanium Dioxide  | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 6.82 mg/l                         |
| NUC - Titanium Dioxide  | Ingestion                      | Rat                    | LD50 > 10,000 mg/kg                      |
| Methacrylated Amine   | Dermal                         | Professional judgement | LD50 estimated to be > 5,000 mg/kg       |
| Methacrylated Amine   | Ingestion                      | Rat                    | LD50 > 400 mg/kg                         |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name  | Species                | Value                     |
|---|------------------------|---------------------------|
| Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material | Professional judgement | No significant irritation |
| SUBSTITUTED DIMETHACRYLATE  | Rabbit                 | No significant irritation |
| SILANE TREATED SILICA   | Rabbit                 | No significant irritation |
| CALCIUM HYDROXIDE   | Human                  | Corrosive                 |
| NUC - Titanium Dioxide  | Rabbit                 | No significant irritation |

**Serious Eye Damage/Irritation**

| Name   | Species                | Value                     |
|--|------------------------|---------------------------|
| Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material | Professional judgement | No significant irritation |
| SUBSTITUTED DIMETHACRYLATE   | Rabbit                 | Mild irritant             |
| SILANE TREATED SILICA  | Rabbit                 | No significant irritation |
| CALCIUM HYDROXIDE  | Rabbit                 | Corrosive                 |
| NUC - Titanium Dioxide   | Rabbit                 | No significant irritation |

**Skin Sensitization**

| Name   | Species                | Value           |
|--|------------------------|-----------------|
| SUBSTITUTED DIMETHACRYLATE   | Guinea pig             | Not sensitizing |
| 2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1) | Mouse                  | Not sensitizing |
| SILANE TREATED SILICA  | Human and animal       | Not sensitizing |
| 2-Propenoic acid, 2-methyl-, [(3-methoxypropyl)imino]di-2,1-ethanediyl ester     | Professional judgement | Sensitizing     |
| NUC - Titanium Dioxide   | Human and animal       | Not sensitizing |
| Methacrylated Amine  | Professional judgement | 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         |
|--|----------|---------------|
| SUBSTITUTED DIMETHACRYLATE   | In Vitro | Not mutagenic |
| 2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1) | In Vitro | Not mutagenic |
| SILANE TREATED SILICA  | In Vitro | Not mutagenic |
| NUC - Titanium Dioxide   | In Vitro | Not mutagenic |
| NUC - Titanium Dioxide   | In vivo  | 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 |
| NUC - Titanium Dioxide | Ingestion     | Multiple animal species | Not carcinogenic   |
| NUC - Titanium Dioxide | Inhalation    | Rat                     | Carcinogenic   |

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

| Name                  | Route     | Value                            | Species | Test Result         | Exposure Duration |
|-----------------------|-----------|----------------------------------|---------|---------------------|-------------------|
| SILANE TREATED SILICA | Ingestion | Not toxic to female reproduction | Rat     | NOAEL 509 mg/kg/day | 1 generation      |

|                       |           |                                |     |                       |                      |
|-----------------------|-----------|--------------------------------|-----|-----------------------|----------------------|
| SILANE TREATED SILICA | Ingestion | Not toxic to male reproduction | Rat | NOAEL 497 mg/kg/day   | 1 generation         |
| SILANE TREATED SILICA | Ingestion | Not toxic to development       | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |

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

| Name   | Route      | Target Organ(s)        | Value  | Species | Test Result       | Exposure Duration |
|--|------------|------------------------|--|---------|-------------------|-------------------|
| 2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-phenyl-1-(phenylmethyl)-, calcium salt (2:1) | Ingestion  | nervous system         | Some positive data exist, but the data are not sufficient for classification | Rat     | NOAEL 2,000 mg/kg |                   |
| CALCIUM HYDROXIDE  | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human   | LOAEL 2.5 mg/m3   | 20 minutes        |

**Specific Target Organ Toxicity - repeated exposure**

| Name                   | Route      | Target Organ(s)                | Value  | Species | Test Result         | Exposure Duration     |
|------------------------|------------|--------------------------------|--|---------|---------------------|-----------------------|
| SILANE TREATED SILICA  | Inhalation | respiratory system   silicosis | All data are negative  | Human   | NOAEL Not available | occupational exposure |
| NUC - Titanium Dioxide | Inhalation | respiratory system             | Some positive data exist, but the data are not sufficient for classification | Rat     | LOAEL 0.01 mg/l     | 2 years               |
| NUC - Titanium Dioxide | Inhalation | pulmonary fibrosis             | All data are negative  | Human   | NOAEL Not available | occupational exposure |

**Aspiration Hazard**

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

**Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.**

**SECTION 12: Ecological information****Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

**Chemical fate information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

**SECTION 13: Disposal considerations****13.1. Disposal methods**

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

Dispose of waste product in a permitted industrial waste facility.

**EPA Hazardous Waste Number (RCRA):** 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.

|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 28-1333-5 | <b>Version Number:</b>  | 4.00     |
| <b>Issue Date:</b>     | 08/31/15  | <b>Supersedes Date:</b> | 06/01/15 |

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