

## Safety Data Sheet

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Document Group:	19-8502-7	Version Number:	5.00
Issue Date:	02/16/18	Supercedes Date:	09/11/17

#### **Product identifier**

3M<sup>™</sup>Scotch-Weld<sup>™</sup> Epoxy Adhesive DP100FR Cream

ID Number(s):

62-3531-1430-9, 62-3531-1431-7, 62-3531-1435-8, 62-3531-1436-6, 62-3531-3530-4, 62-3531-3830-8

#### **Recommended use**

Structural adhesive

Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS: Telephone:	3M Center, St. Paul, MN 55144-1000, USA 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:

19-8211-5, 19-8269-3

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Document Group:	19-8211-5	Version Number:	7.00
Issue Date:	02/16/18	Supercedes Date:	09/11/17

## **SECTION 1: Identification**

#### 1.1. Product identifier

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive DP100FR Cream, Part A

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

Recommended use Structural adhesive

1.3. Supplier's details MANUFACTURER: DIVISION: ADDRESS: Telephone:

3M Industrial Adhesives and Tapes Division 3M Center, St. Paul, MN 55144-1000, USA 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**

#### 2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2A. Skin Corrosion/Irritation: Category 2. Skin Sensitizer: Category 1B.

2.2. Label elements Signal word Warning

Symbols Exclamation mark |

#### **Pictograms**

02/16/18



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

#### **Precautionary Statements**

#### **Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves and eye/face protection. 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.
Take off contaminated clothing and wash it before reuse.

#### **Disposal:**

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

1% of the mixture consists of ingredients of unknown acute dermal toxicity.

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

Ingredient	C.A.S. No.	% by Wt
Mercaptan Polymer	72244-98-5	65 - 75 Trade Secret *
Ammonium Polyphosphate	68333-79-9	10 - 30 Trade Secret *
2,4,6-tris((Dimethylamino)Methyl)Phenol	90-72-2	5 - 10 Trade Secret *
Amorphous Silica	67762-90-7	1 - 5 Trade Secret *
bis((Dimethylamino)Methyl)Phenol	71074-89-0	1 - 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>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ketones	During Combustion
Ammonia	During Combustion
Oxides of Nitrogen	During Combustion
Oxides of Sulfur	During Combustion
Toxic Vapor, Gas, Particulate	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. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

#### 6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible.

Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. 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

For industrial or professional use only. 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. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

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

Store away from heat. Store away from oxidizing agents.

## **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.

C.A.S. No.	Agency	Limit type	Additional Comments
67762-90-7	OSHA	TWA concentration:0.8	
		mg/m3;TWA:20 millions of	
		particles/cu. ft.	
		67762-90-7 OSHA	

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 general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

#### 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: Indirect Vented Goggles

Indirect Vented Goggles

#### **Skin/hand protection**

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

#### **Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

### **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid	
Specific Physical Form:	Viscous Liquid	
Odor, Color, Grade:	Strong mercaptan odor, white.	
Odor threshold	No Data Available	
рН	Not Applicable	
Melting point	Not Applicable	
Boiling Point	No Data Available	
Flash Point	> 201 °F [ <i>Test Method</i> :Closed Cup]	
Evaporation rate	Negligible	
Flammability (solid, gas)	Not Applicable	
Flammable Limits(LEL)	No Data Available	
Flammable Limits(UEL)	No Data Available	
Vapor Pressure	<=27 psia [@ 131 °F]	
Vapor Density	Not Applicable	
Density	1.3 g/ml [ <i>Ref Std</i> :WATER=1]	
Specific Gravity	1.300 [ <i>Ref Std</i> :WATER=1]	
Solubility in Water	Nil	
Solubility- non-water	No Data Available	
Partition coefficient: n-octanol/ water	No Data Available	
Autoignition temperature	No Data Available	
Decomposition temperature	No Data Available	
Viscosity	35,000 centipoise - 85,000 centipoise [ <i>Test Method</i> :Brookfield]	
Hazardous Air Pollutants	0 % weight [Test Method:Calculated]	
Molecular weight	No Data Available	
VOC Less H2O & Exempt Solvents	0 g/l [Test Method:calculated SCAQMD rule 443.1]	
	[Details: when used as intended with Part B]	
VOC Less H2O & Exempt Solvents	0 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1] [ <i>Details</i> :as	
	supplied]	
VOC Less H2O & Exempt Solvents	0 % [ <i>Test Method</i> :calculated SCAQMD rule 443.1]	
	[Details: when used as intended with Part B]	

### **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

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

#### 10.5. Incompatible materials

Strong oxidizing agents

#### 10.6. Hazardous decomposition products

<u>Substance</u>

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

## **SECTION 11: Toxicological information**

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

#### 11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

#### Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

#### **Skin Contact:**

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. 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.

#### **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 ATE2,000 - 5,000 mg/kg
Mercaptan Polymer	Dermal	Rabbit	LD50 > 10,200 mg/kg

Mercaptan Polymer	Ingestion	Rat	LD50 2,600 mg/kg
Ammonium Polyphosphate	Dermal	Rat	LD50 > 5,000 mg/kg
Ammonium Polyphosphate	Inhalation-	Rat	LC50 > 5.1 mg/l
	Dust/Mist		
	(4 hours)		
Ammonium Polyphosphate	Ingestion	Rat	LD50 4,740 mg/kg
2,4,6-tris((Dimethylamino)Methyl)Phenol	Dermal	Rat	LD50 1,280 mg/kg
2,4,6-tris((Dimethylamino)Methyl)Phenol	Ingestion	Rat	LD50 1,000 mg/kg
Amorphous Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Amorphous Silica	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
Amorphous Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
bis((Dimethylamino)Methyl)Phenol	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
Overall product	In vitro	Irritant
	data	
Mercaptan Polymer	Rabbit	No significant irritation
2,4,6-tris((Dimethylamino)Methyl)Phenol	Rabbit	Corrosive
Amorphous Silica	Rabbit	No significant irritation
bis((Dimethylamino)Methyl)Phenol	similar	Corrosive
	compoun	
	ds	

### Serious Eye Damage/Irritation

Name	Species	Value
Overall product	In vitro	Severe irritant
	data	
Mercaptan Polymer	Rabbit	Mild irritant
2,4,6-tris((Dimethylamino)Methyl)Phenol	Rabbit	Corrosive
Amorphous Silica	Rabbit	No significant irritation
bis((Dimethylamino)Methyl)Phenol	similar	Corrosive
	compoun	
	ds	

#### **Skin Sensitization**

Name	Species	Value
Mercaptan Polymer	Mouse	Sensitizing
2,4,6-tris((Dimethylamino)Methyl)Phenol	Guinea	Not classified
	pig	
Amorphous Silica	Human	Not classified
	and	
	animal	

#### **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
Mercaptan Polymer	In Vitro	Not mutagenic
2,4,6-tris((Dimethylamino)Methyl)Phenol	In Vitro	Not mutagenic
Amorphous Silica	In Vitro	Not mutagenic

### Carcinogenicity

Name	Route	Species	Value
Amorphous Silica	Not	Mouse	Some positive data exist, but the data are not

Specified	sufficient for classification

#### **Reproductive Toxicity**

#### **Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Amorphous Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Amorphous Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Amorphous Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s

#### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Inhalation	respiratory irritation	Some positive data exist, but the		NOAEL Not	
				available	
				Inhalation         respiratory irritation         Some positive data exist, but the data are not sufficient for	Inhalation     respiratory irritation     Some positive data exist, but the data are not sufficient for     NOAEL Not available

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Mercaptan Polymer	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 75 mg/kg/day	90 days
Mercaptan Polymer	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	90 days
Mercaptan Polymer	Ingestion	endocrine system   heart   skin   immune system   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
2,4,6- tris((Dimethylamino)Meth yl)Phenol	Dermal	skin   liver   nervous system   auditory system   hematopoietic system   eyes	Not classified	Rat	NOAEL 125 mg/kg/day	28 days
Amorphous Silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure

#### **Aspiration Hazard**

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

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

## **SECTION 12: Ecological information**

#### **Ecotoxicological information**

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

#### **Chemical fate information**

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

## **SECTION 13: Disposal considerations**

#### 13.1. Disposal methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

## **SECTION 14: Transport Information**

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

## **SECTION 15: Regulatory information**

#### 15.1. US Federal Regulations

Contact 3M for more information.

#### **EPCRA 311/312 Hazard Classifications:**

Physical	Hazards

Not applicable

Health Hazards
Respiratory or Skin Sensitization
Serious eye damage or eye irritation
Skin Corrosion or Irritation

#### 15.2. State Regulations

Contact 3M for more information.

#### **15.3.** Chemical Inventories

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA.

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.

Document Group:	19-8211-5	Version Number:	7.00
Issue Date:	02/16/18	Supercedes Date:	09/11/17

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Document Group:	19-8269-3	Version Number:	8.00
Issue Date:	05/21/18	Supercedes Date:	12/01/17

## **SECTION 1: Identification**

#### 1.1. Product identifier

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive DP100FR Off-White, Part B

**Product Identification Numbers** LA-D100-0165-3, LA-D100-0165-4, LA-D100-0165-5, LA-D100-2252-8, LA-D100-2252-9

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

**Recommended use** Structural adhesive

1.3. Supplier's details	
<b>MANUFACTURER:</b>	3M
DIVISION:	Industrial Adhesives and Tapes 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**

#### 2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B. Skin Sensitizer: Category 1.

2.2. Label elements Signal word Warning

Symbols Exclamation mark |

Pictograms

05/21/18



Hazard Statements Causes eye irritation. May cause an allergic skin reaction.

#### **Precautionary Statements**

#### **Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

#### **Response:**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water.

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

Wash contaminated clothing before reuse.

#### 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
Epoxy Resin	25068-38-6	70 - 80 Trade Secret *
Ammonium Polyphosphate	68333-79-9	10 - 30 Trade Secret *
Titanium Dioxide	13463-67-7	1 - 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:

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

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Ketones	During Combustion
Ammonia	During Combustion
Toxic Vapor, Gas, Particulate	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. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

#### 6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. 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

For industrial or professional use only. 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. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

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

Store away from heat. Store away from acids. Store away from oxidizing agents.

### **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
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human
				carcin
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	

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 general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

#### 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: Indirect Vented Goggles

#### **Skin/hand protection**

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

#### **Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

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Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Fire interior mation on busic physical and chemical prop	
General Physical Form:	Liquid
Specific Physical Form:	Viscous Liquid
Odor, Color, Grade:	white, epoxy odor
Odor threshold	No Data Available
рН	No Data Available
Melting point	Not Applicable
Boiling Point	No Data Available
Flash Point	> 201 °F [@ 1 atm] [Test Method:Closed Cup]
Evaporation rate	Negligible
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	1.2 g/ml [ <i>Ref Std</i> :WATER=1]
Specific Gravity	1.2 [ $Ref Std$ :WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
<b>Partition coefficient: n-octanol/ water</b>	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	60,000 - 80,000 centipoise [Test Method:Brookfield]
Hazardous Air Pollutants	0 % weight [Test Method:Calculated]
Molecular weight	No Data Available
VOC Less H2O & Exempt Solvents	0 g/l [Test Method:calculated SCAQMD rule 443.1]
	[Details: when used as intended with Part A]
VOC Less H2O & Exempt Solvents	0 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1] [ <i>Details</i> :as supplied]
VOC Less H2O & Exempt Solvents	0 % [ <i>Test Method</i> :calculated SCAQMD rule 443.1] [ <i>Details</i> :when used as intended with Part A]

## **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

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

**10.5. Incompatible materials** Strong acids Strong oxidizing agents

# 10.6. Hazardous decomposition products <u>Substance</u>

None known.

**Condition** 

Refer to section 5.2 for hazardous decomposition products during combustion.

## **SECTION 11: Toxicological information**

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

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:

No health effects are expected.

#### 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:

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

#### Ingestion:

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

#### **Carcinogenicity:**

Ingredient	CAS No.	Class Description	Regulation
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	Ingestion		No data available; calculated ATE >5,000 mg/kg
Epoxy Resin	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy Resin	Ingestion	Rat	LD50 > 1,000 mg/kg
Ammonium Polyphosphate	Dermal	Rat	LD50 > 5,000 mg/kg
Ammonium Polyphosphate	Inhalation-	Rat	LC50 > 5.1 mg/l
	Dust/Mist		
	(4 hours)		

## **3M<sup>TM</sup> Scotch-Weld<sup>TM</sup> Epoxy Adhesive DP100FR Off-White, Part B** 05/21/18

Ammonium Polyphosphate	Ingestion	Rat	LD50 4,740 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-	Rat	LC50 > 6.82 mg/l
	Dust/Mist		
	(4 hours)		
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

#### **Skin Corrosion/Irritation**

Name	Species	Value
Epoxy Resin	Rabbit	Mild irritant
Titanium Dioxide	Rabbit	No significant irritation

#### Serious Eye Damage/Irritation

Name	Species	Value
Epoxy Resin	Rabbit	Moderate irritant
Titanium Dioxide	Rabbit	No significant irritation

#### **Skin Sensitization**

Name	Species	Value
Epoxy Resin	Human	Sensitizing
	and	
	animal	
Titanium Dioxide	Human	Not classified
	and	
	animal	

### **Respiratory Sensitization**

Name	Species	Value
Epoxy Resin	Human	Not classified

#### Germ Cell Mutagenicity

Name	Route	Value
Epoxy Resin	In vivo	Not mutagenic
Epoxy Resin	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic

#### Carcinogenicity

Name	Route	Species	Value
Epoxy Resin	Dermal	Mouse	Some positive data exist, but the data are not
			sufficient for classification
Titanium Dioxide	Ingestion	Multiple	Not carcinogenic
		animal	
		species	
Titanium Dioxide	Inhalation	Rat	Carcinogenic

#### **Reproductive Toxicity**

### **Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Epoxy Resin	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation

#### **3M<sup>TM</sup>** Scotch-Weld<sup>TM</sup> Epoxy Adhesive DP100FR Off-White, Part B 05/21/18

Epoxy Resin	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesi s
Epoxy Resin	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 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
Epoxy Resin	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Epoxy Resin	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Epoxy Resin	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
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
Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure

#### **Aspiration Hazard**

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

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

## **SECTION 12: Ecological information**

#### **Ecotoxicological information**

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

#### **Chemical fate information**

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

## **SECTION 13: Disposal considerations**

#### 13.1. Disposal methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty drums/barrels/containers used for transporting and handling hazardous chemicals

#### 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive DP100FR Off-White, Part B 05/21/18

(chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

## **SECTION 14: Transport Information**

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

## **SECTION 15: Regulatory information**

#### 15.1. US Federal Regulations

Contact 3M for more information.

#### **EPCRA 311/312 Hazard Classifications:**

Physical Hazards

Not applicable

### Health Hazards

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

#### **15.2. State Regulations**

Contact 3M for more information.

#### **15.3.** Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

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.

Document Group:	19-8269-3	Version Number:	8.00
Issue Date:	05/21/18	Supercedes Date:	12/01/17

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