

Safety Data Sheet

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 Document Group:
 28-2361-5
 Version Number:
 4.00

 Issue Date:
 08/31/15
 Supercedes Date:
 05/30/14

Product identifier

3MTM Composite & Metal Bonding Adhesvie - 35 PN 08219

ID Number(s):

41-0003-6770-0, 41-0003-8021-6, 60-4550-5262-5

Recommended use

Automotive, Urethane Repair Adhesive used to bond SMC and FRP (traditional fiberglass) body panels to each other and to primed metal frames.

Supplier's details

MANUFACTURER: 3M

DIVISION: Automotive Aftermarket

ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA **Telephone:** 1-888-3M HELPS (1-888-364-3577)

Emergency telephone number

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

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

26-6862-2, 28-2365-6

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 Document Group:
 26-6862-2
 Version Number:
 3.00

 Issue Date:
 05/23/14
 Supercedes Date:
 12/10/12

SECTION 1: Identification

1.1. Product identifier

3MTM SMC/Fiberglass Repair Adhesive-35 PN 08219 Part B

Product Identification Numbers

LB-K100-0708-1, LB-K100-0910-4

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Body Repair

1.3. Supplier's details

MANUFACTURER: 3M

DIVISION: Automotive Aftermarket

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

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Respiratory Sensitizer: Category 1. Skin Sensitizer: Category 1.

Reproductive Toxicity: Category 2.

Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word

Danger

Symbols

Health Hazard |

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Pictograms



Hazard Statements

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure:

respiratory system |

Precautionary Statements

Prevention:

Obtain special instructions before use.

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

Do not breathe dust/fume/gas/mist/vapors/spray.

In case of inadequate ventilation wear respiratory protection.

Wear protective gloves.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

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

Response:

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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.

Get medical advice/attention if you feel unwell.

Storage:

Store locked up.

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

2.3. Hazards not otherwise classified

None.

2% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Polyether Polyol (NJTSRN 04499600-6782)	Trade Secret*	30 - 60 Trade Secret *
Polyol (NJTSRN 04499600-6783)	Trade Secret*	15 - 40 Trade Secret *
Talc	14807-96-6	15 - 40 Trade Secret *
Urethane Prepolymer (NJTSRN 04499600-6781)	Trade Secret*	3 - 7 Trade Secret *
Thickening Agent	Trade Secret*	1 - 5 Trade Secret *

Piperazine	110-85-0	< 1 Trade Secret *
Quartz Silica	14808-60-7	< 0.1 Trade Secret *
Titanium Dioxide	13463-67-7	< 0.1 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

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>	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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^{*}The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

6.2. Environmental precautions

Avoid release to the environment.

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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from strong bases. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Piperazine	110-85-0	ACGIH	TWA(as piperazine, inhalable	Sensitizer
			fraction & samp; vapor):0.03	
			ppm	
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m3	
Titanium Dioxide	13463-67-7	CMRG	TWA(as respirable dust):5	
			mg/m3	
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2	
			mg/m3	
Talc	14807-96-6	CMRG	TWA(as respirable dust):0.5	
			mg/m3	
Talc	14807-96-6	OSHA	TWA concentration(as total	
			dust):0.3 mg/m3;TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.);TWA:20	
			millions of particles/cu. ft.	
Quartz Silica	14808-60-7	ACGIH	TWA(respirable	
			fraction):0.025 mg/m3	
Quartz Silica	14808-60-7	OSHA	TWA concentration(as total	

3M™ SMC/Fiberglass Repair Adhesive-35 PN 08219 Part B 05/23/14

dust):0.3 mg/m3;TWA
concentration(respirable):0.1
mg/m3(2.4 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 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: Safety Glasses with side shields

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.

Gloves made from the following material(s) are recommended: Butyl Rubber

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

Odor, Color, Grade: Slight ammonia like odor, dark green.

Odor threshold No Data Available pН Not Applicable **Melting point** No Data Available **Boiling Point** No Data Available

Flash Point > 340 °F [Test Method: Tagliabue Closed Cup] <=1 [Details: Gels with exposure to humidity.] **Evaporation rate**

Flammability (solid, gas) Not Applicable Not Applicable Flammable Limits(LEL)

Flammable Limits(UEL) Not Applicable

<=0.000004 mmHg [@ 68 °F] **Vapor Pressure**

>=1 [*Ref Std:* AIR=1] **Vapor Density**

Density 1.2 g/ml

Specific Gravity 1.0 - 1.2 [*Ref Std:* WATER=1]

Solubility in Water Negligible

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 No Data Available

Hazardous Air Pollutants 0 % weight [Test Method: Calculated]

Volatile Organic Compounds 1 g/l [Test Method: calculated SCAQMD rule 443.1] **Volatile Organic Compounds** 0.1 % weight [Test Method: calculated per CARB title 2]

Percent volatile 0.093 % weight

1 g/l [Test Method: calculated SCAQMD rule 443.1] **VOC Less H2O & Exempt Solvents**

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

High shear and high temperature conditions

10.5. Incompatible materials

Strong acids Strong bases Alcohols Strong oxidizing agents

10.6. Hazardous decomposition products

Substance Condition Aldehydes Not Specified Not Specified Hydrogen Cyanide

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

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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:

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Vapors released during curing may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

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

Eye Contact:

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

No health effects are expected.

Target Organ Effects:

Prolonged or repeated exposure may cause:

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Ingredient	C.A.S. No.	Class Description	Regulation
Quartz Silica	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
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
Polyether Polyol (NJTSRN 04499600-6782)	Dermal	Rat	LD50 > 2,000 mg/kg
Polyether Polyol (NJTSRN 04499600-6782)	Ingestion	Rat	LD50 > 2,500 mg/kg
Talc	Dermal		LD50 Not available
Talc	Ingestion		LD50 Not available
Polyol (NJTSRN 04499600-6783)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Polyol (NJTSRN 04499600-6783)	Ingestion	Rat	LD50 > 10,000 mg/kg
Urethane Prepolymer (NJTSRN 04499600-6781)	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg

Piperazine	Dermal		estimated to be > 5,000 mg/kg
Piperazine	Inhalation-		estimated to be > 12.5 mg/l
	Dust/Mist		
Piperazine	Inhalation-		estimated to be > 50 mg/l
	Vapor		
Piperazine	Ingestion		estimated to be > 5,000 mg/kg
Quartz Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz Silica	Ingestion		LD50 estimated to be > 5,000 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
Talc	Rabbit	No significant irritation
Quartz Silica		No significant irritation
Titanium Dioxide	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Talc	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Titanium Dioxide	Human	Not sensitizing
	and	
	animal	

Respiratory Sensitization

Name	Species	Value
Talc	Human	Not sensitizing

Germ Cell Mutagenicity

Name	Route	Value
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Quartz Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In vivo	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

sai chiogenicity			
Name	Route	Species	Value
Talc	Inhalation	Rat	Some positive data exist, but the data are not
			sufficient for classification
Quartz Silica	Inhalation	Human	Carcinogenic
		and	
		animal	
Titanium Dioxide	Ingestion	Multiple	Not carcinogenic
		animal	
		species	
Titanium Dioxide	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

 reproductive units, or 20 veropinents					
Name	Route	Value	Species	Test Result	Exposure

					Duration
Talc	Ingestion	Not toxic to development	Rat	NOAEL 1,600 mg/kg	during organogenesi s

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 18 mg/m3	113 weeks
Quartz Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.010 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure

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Name	Value				

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

SECTION 14: Transport Information

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

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 - Yes

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.

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

HMIS Hazard Classification

Health: 2 Flammability: 1 Physical Hazard: 1 Personal Protection: X - See PPE section.

Hazardous Material Identification System (HMIS® III) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

Document Group: Version Number: 3.00 26-6862-2 **Issue Date:** 05/23/14 **Supercedes Date:** 12/10/12

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 Document Group:
 28-2365-6
 Version Number:
 3.01

 Issue Date:
 04/21/15
 Supercedes Date:
 05/23/14

SECTION 1: Identification

1.1. Product identifier

3MTM SMC/Fiberglass Repair Adhesive-35 PN 08219 Part A

Product Identification Numbers

LB-K100-0796-6, LB-K100-0908-5

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Urethane Repair Adhesive used to bond SMC and FRP (traditional fiberglass) body panels to each other and to primed metal frames.

1.3. Supplier's details

MANUFACTURER: 3M

DIVISION: Automotive Aftermarket

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

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Acute Toxicity (inhalation): Category 4. Serious Eye Damage/Irritation: Category 2A. Skin Corrosion/Irritation: Category 2.

Respiratory Sensitizer: Category 1.

Skin Sensitizer: Category 1.

Specific Target Organ Toxicity (respiratory irritation): Category 3. Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word

Danger

Page 1 of 12

Symbols

Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Causes serious eye irritation.

Causes skin irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Harmful if inhaled.

May cause respiratory irritation.

Causes damage to organs through prolonged or repeated exposure: respiratory system |

Precautionary Statements

Prevention:

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

In case of inadequate ventilation wear respiratory protection.

Wear protective gloves and eye/face protection.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

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

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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.

Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

35% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Methylene Phenylene Isocyanate	101-68-8	25 - 60 Trade Secret *
Urethane Prepolymer (NJTSRN 04499600-6779)	Trade Secret*	15 - 40 Trade Secret *
Diisocyanate Polymer	Trade Secret*	5 - 20 Trade Secret *
Aluminum Silicate (NJTSRN 04499600-6789)	Trade Secret*	7 - 13 Trade Secret *
Talc	14807-96-6	7 - 13 Trade Secret *
Aluminum Oxide (non-fibrous)	Trade Secret*	1 - 7
SODIUM OXIDE	Trade Secret*	1 - 5
Thickening Agent (NJTSRN 04499600-6784)	Trade Secret*	1 - 5 Trade Secret *
CALCIUM OXIDE	Trade Secret*	1 - 5

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

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

DO NOT USE WATER

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

<u>Substance</u> Carbon monoxide Carbon dioxide

Condition

During Combustion
During Combustion

^{*}The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

Hydrogen Cyanide Oxides of Nitrogen **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.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. 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 container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Do not use in a confined area with minimal air exchange. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed to prevent loss of stabilizing materials. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from strong bases.

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
FREE ISOCYANATES	101-68-8	Manufacturer	TWA:0.005 ppm;STEL:0.02	
		determined	ppm	
Methylene Phenylene Isocyanate	101-68-8	ACGIH	TWA:0.005 ppm	
Methylene Phenylene Isocyanate	101-68-8	OSHA	CEIL:0.2 mg/m3(0.02 ppm)	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2	A4: Not class. as human
			mg/m3	carcin
Talc	14807-96-6	CMRG	TWA(as respirable dust):0.5	
			mg/m3	

Talc	14807-96-6	OSHA	TWA concentration(as total	
			dust):0.3 mg/m3;TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.);TWA:20	
			millions of particles/cu. ft.	
Aluminum Oxide (non-fibrous)	Trade	ACGIH	TWA(respirable fraction):1	A4: Not class. as human
	Secret		mg/m3	carcin
Aluminum Oxide (non-fibrous)	Trade	CMRG	TWA:1 fiber/cc	
	Secret			
Aluminum Oxide (non-fibrous)	Trade	OSHA	TWA(as total dust):15	
	Secret		mg/m3;TWA(respirable	
			fraction):5 mg/m3	
Aluminum Silicate (NJTSRN	Trade	CMRG	TWA(as respirable dust):3	
04499600-6789)	Secret		mg/m3	
Aluminum Silicate (NJTSRN	Trade	OSHA	TWA concentration:0.8	
04499600-6789)	Secret		mg/m3;TWA:20 millions of	
			particles/cu. ft.	
CALCIUM OXIDE	Trade	ACGIH	TWA:2 mg/m3	
	Secret			
CALCIUM OXIDE	Trade	OSHA	TWA:5 mg/m3	
	Secret		_	
Thickening Agent (NJTSRN	Trade	OSHA	TWA concentration:0.8	
04499600-6784)	Secret		mg/m3;TWA:20 millions of	
			particles/cu. ft.	

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CMRG: Chemical Manufacturer's Recommended Guidelines

OSHA: United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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.

Gloves made from the following material(s) are recommended: Nitrile Rubber

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If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Nitrile

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

Odor, Color, Grade: White, slight isocyanate odor

pHNot ApplicableMelting pointNot ApplicableBoiling PointNo Data Available

Flash Point > 383 °F [Test Method: Closed Cup]

Evaporation rate < 1 [*Ref Std:* ETHER=1]

Flammability (solid, gas)

Flammable Limits(LEL)

Flammable Limits(UEL)

No Data Available

No Data Available

Vapor Pressure .010 mmHg [Details: @77.00 F for product]

Vapor Density < 1 [Ref Std: AIR=1]

Density 10.72 lb/gal

Specific Gravity 1.288 [Ref Std: WATER=1]

Solubility In WaterNo Data AvailablePartition coefficient: n-octanol/ waterNo Data AvailableViscosityNo Data Available

Hazardous Air Pollutants0.779 lb HAPS/lb solids [Test Method: Calculated]Volatile Organic Compounds0 g/l [Test Method: calculated SCAQMD rule 443.1]Volatile Organic Compounds0 % weight [Test Method: calculated per CARB title 2]

Percent volatile 0 % weight

VOC Less H2O & Exempt Solvents 0 g/l [*Test Method:* calculated SCAQMD rule 443.1]

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 may occur.

10.4. Conditions to avoid

Heat

Sparks and/or flames

3M™ SMC/Fiberglass Repair Adhesive-35 PN 08219 Part A 04/21/15

10.5. Incompatible materials

Strong acids Strong bases Water

10.6. Hazardous decomposition products

Substance

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

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:

Harmful if inhaled.

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

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

May cause additional health effects (see below).

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.

Eve 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:

Prolonged or repeated exposure may cause target organ effects:

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

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Additional Information:

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

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	Inhalation-	•	No data available; calculated ATE 10 - 20 mg/l
•	Vapor(4 hr)		
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000
			mg/kg
Methylene Phenylene Isocyanate	Inhalation-		LC50 estimated to be 10 - 20 mg/l
	Vapor		
Methylene Phenylene Isocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Methylene Phenylene Isocyanate	Inhalation-	Rat	LC50 0.369 mg/l
	Dust/Mist		
	(4 hours)		
Methylene Phenylene Isocyanate	Ingestion	Rat	LD50 31,600 mg/kg
Urethane Prepolymer (NJTSRN 04499600-6779)	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Diisocyanate Polymer	Inhalation-		LC50 estimated to be 10 - 20 mg/l
	Vapor		
Diisocyanate Polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Diisocyanate Polymer	Inhalation-	Rat	LC50 0.369 mg/l
	Dust/Mist		
	(4 hours)		
Diisocyanate Polymer	Ingestion	Rat	LD50 31,600 mg/kg
Talc	Dermal		LD50 Not available
Talc	Ingestion		LD50 Not available
Aluminum Silicate (NJTSRN 04499600-6789)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Aluminum Silicate (NJTSRN 04499600-6789)	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
Aluminum Silicate (NJTSRN 04499600-6789)	Ingestion	Rat	LD50 > 5,110 mg/kg
Aluminum Oxide (non-fibrous)	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminum Oxide (non-fibrous)	Inhalation-	Rat	LC50 > 2.3 mg/l
	Dust/Mist		
	(4 hours)		
Aluminum Oxide (non-fibrous)	Ingestion	Rat	LD50 > 5,000 mg/kg
SODIUM OXIDE	Ingestion		LD50 estimated to be 50 - 300 mg/kg
CALCIUM OXIDE	Ingestion	Rat	LD50 > 2,500 mg/kg
Thickening Agent (NJTSRN 04499600-6784)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Thickening Agent (NJTSRN 04499600-6784)	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
Thickening Agent (NJTSRN 04499600-6784)	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Methylene Phenylene Isocyanate	official	Irritant
	classifica	
	tion	
Diisocyanate Polymer	official	Irritant
	classifica	
	tion	
Talc	Rabbit	No significant irritation
Aluminum Silicate (NJTSRN 04499600-6789)	Rabbit	No significant irritation
Aluminum Oxide (non-fibrous)	Rabbit	No significant irritation
CALCIUM OXIDE	Human	Corrosive
Thickening Agent (NJTSRN 04499600-6784)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Methylene Phenylene Isocyanate	official	Severe irritant
	classifica	
	tion	
Diisocyanate Polymer	official	Severe irritant
	classifica	
	tion	
Talc	Rabbit	No significant irritation
Aluminum Silicate (NJTSRN 04499600-6789)	Rabbit	No significant irritation
Aluminum Oxide (non-fibrous)	Rabbit	No significant irritation
CALCIUM OXIDE	Rabbit	Corrosive
Thickening Agent (NJTSRN 04499600-6784)	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Methylene Phenylene Isocyanate	official	Sensitizing
	classifica	
	tion	
Diisocyanate Polymer	official	Sensitizing
	classifica	
	tion	
Aluminum Silicate (NJTSRN 04499600-6789)	Human	Not sensitizing
	and	
	animal	
Thickening Agent (NJTSRN 04499600-6784)	Human	Not sensitizing
	and	
	animal	

Respiratory Sensitization

Name	Species	Value
Methylene Phenylene Isocyanate	Human	Sensitizing
Diisocyanate Polymer	Human	Sensitizing
Talc	Human	Not sensitizing

Germ Cell Mutagenicity

Name	Route	Value
Methylene Phenylene Isocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Diisocyanate Polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Aluminum Silicate (NJTSRN 04499600-6789)	In Vitro	Not mutagenic
Aluminum Oxide (non-fibrous)	In Vitro	Not mutagenic
CALCIUM OXIDE	In Vitro	Not mutagenic
Thickening Agent (NJTSRN 04499600-6784)	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Methylene Phenylene Isocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Diisocyanate Polymer	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Aluminum Silicate (NJTSRN 04499600-6789)	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Aluminum Oxide (non-fibrous)	Inhalation	Rat	Not carcinogenic
Thickening Agent (NJTSRN 04499600-6784)	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
Methylene Phenylene Isocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesi s
Diisocyanate Polymer	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesi s
Talc	Ingestion	Not toxic to development	Rat	NOAEL 1,600 mg/kg	during organogenesi s
Aluminum Silicate (NJTSRN 04499600-6789)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Aluminum Silicate (NJTSRN 04499600-6789)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Aluminum Silicate (NJTSRN 04499600-6789)	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
Thickening Agent (NJTSRN 04499600-6784)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Thickening Agent (NJTSRN 04499600-6784)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Thickening Agent (NJTSRN 04499600-6784)	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Methylene Phenylene	Inhalation	respiratory irritation	May cause respiratory irritation	official	NOAEL Not	
Isocyanate				classifica	available	
				tion		
Diisocyanate Polymer	Inhalation	respiratory irritation	May cause respiratory irritation	official	NOAEL Not	
				classifica	available	
				tion		
CALCIUM OXIDE	Inhalation	respiratory irritation	May cause respiratory irritation	Not	NOAEL Not	occupational
				available	available	exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Methylene Phenylene Isocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Diisocyanate Polymer	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 18 mg/m3	113 weeks
Aluminum Silicate (NJTSRN 04499600-6789)	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Aluminum Oxide (non-fibrous)	Inhalation	pneumoconiosis pulmonary fibrosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Thickening Agent (NJTSRN 04499600-6784)	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure

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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 uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. 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.

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

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	C.A.S. No	% by Wt
Methylene Phenylene Isocyanate	101-68-8	25 - 60
Methylene Phenylene Isocyanate (Benzene, 1,1'-methylenebis[4-isocyanato-)	101-68-8	25 - 60
Methylene Phenylene Isocyanate (DIISOCYANATES (CERTAIN CHEMICALS	101-68-8	25 - 60
ONLY))		

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.

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: Reacts with Water

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:
 28-2365-6
 Version Number:
 3.01

 Issue Date:
 04/21/15
 Supercedes Date:
 05/23/14

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