

Safety Data Sheet

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Document Group:	11-3172-1	Version Number:	10.01
Issue Date:	07/08/16	Supercedes Date:	09/01/15

Product identifier

3MTM Structural Adhesive PN 08101

ID Number(s):

62-3535-0509-2

Recommended use

Automotive, Two-part general purpose structural adhesive.

Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
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:

10-3180-6, 10-3181-4

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3MTM Structural Adhesive PN 08101 07/08/16



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Document Group:	10-3180-6	Version Number:	49.04
Issue Date:	12/28/17	Supercedes Date:	07/25/14

SECTION 1: Identification

1.1. Product identifier

3M[™] Structural Adhesive Part A (Urethane Side), PN 08101

Product Identification Numbers

LB-K000-1116-0

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Accelerator portion of a two-part general purpose structural adhesive that may be used for bonding metal, glass and plastic.

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

3M Automotive Aftermarket 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

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
Serious Eye Damage/Irritation: Category 2A.
Skin Corrosion/Irritation: Category 2.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements Signal word

12/28/17

Danger

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. 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 eye/face 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: 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.

SECTION 3: Composition/information on ingredients

Ingredient

C.A.S. No.

% by Wt

3M[™] Structural Adhesive Part A (Urethane Side), PN 08101 12/28/17

P,P'-Methylenebis(Phenyl Isocyanate)	101-68-8	10 - 30 Trade Secret *
Polymethylene Polyphenylene Isocyanate	9016-87-9	< 30 Trade Secret *
Talc	14807-96-6	10 - 30 Trade Secret *
Urethane Prepolymer- N.J.T.S. Registry No. 04499600- 7304	Trade Secret*	10 - 30 Trade Secret *
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	< 5 Trade Secret *
Amorphous Silica	7631-86-9	< 1.5 Trade Secret *
Phenyl Isocyanate	103-71-9	< 0.5 Trade Secret *
Sodium Oxide	1313-59-3	< 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>
Hydrocarbons	During Combustion
Isocyanates	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion
Toxic Vapor, Gas, Particulate	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

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. 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. 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

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. Avoid release to the environment. 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 contamination with water or air. If contamination is suspected, do not reseal container. Store away from amines.

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
P,P'-Methylenebis(Phenyl	101-68-8	ACGIH	TWA:0.005 ppm	
Isocyanate)				
P,P'-Methylenebis(Phenyl	101-68-8	OSHA	CEIL:0.2 mg/m3(0.02 ppm)	
Isocyanate)				
Phenyl Isocyanate	103-71-9	ACGIH	TWA:0.005 ppm;STEL:0.015	SKIN; Resp+Dermal
			ppm	sensitizer
Talc	14807-96-6	OSHA	TWA:2 mg/m3	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2	A4: Not class. as human

3M[™] Structural Adhesive Part A (Urethane Side), PN 08101 12/28/17

		mg/m3	carcin
SILICA, AMORPHOUS	7631-86-9	TWA concentration:0.8 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: $V_{i} = V_{i} + V_{i} + 10^{-1}$

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: Butyl Rubber Neoprene

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 - Neoprene

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:	Paste		
Odor, Color, Grade:	Brown liquid with slight odor		

Odor threshold	No Data Available
рН	Not Applicable
Melting point	No Data Available
Boiling Point	406.00 °F [Details:CONDITIONS: @ 5mm Hg]
Flash Point	366.8 °F [<i>Test Method:</i> Tagliabue Closed Cup]
	[Details: Calculated from RMs]
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	0.0010 mmHg [Details:CONDITIONS: @ 25C]
Vapor Density	Not Applicable
Density	1.340 g/ml
Specific Gravity	1.340 [<i>Ref Std</i> :WATER=1]
Solubility in Water	Slight (less than 10%)
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	15,000 - 40,000 centipoise
Hazardous Air Pollutants	0.27 lb HAPS/lb solids [Test Method:Calculated]
Volatile Organic Compounds	7 g/l [Test Method:calculated SCAQMD rule 443.1]
Volatile Organic Compounds	0.5 % weight [<i>Test Method</i> :calculated per CARB title 2]
Percent volatile	0.5 % weight
VOC Less H2O & Exempt Solvents	7 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 will not occur.

10.4. Conditions to avoid

Not determined

10.5. Incompatible materials

Amines Alcohols

Water

Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.

10.6. Hazardous decomposition products

Substance 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.

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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.

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.

Eye Contact:

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

Ingestion:

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:

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.

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 >50 mg/l
	Vapor(4 hr)		
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Polymethylene Polyphenylene Isocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Polymethylene Polyphenylene Isocyanate	Inhalation-	Rat	LC50 0.368 mg/l
	Dust/Mist		
	(4 hours)		
Polymethylene Polyphenylene Isocyanate	Ingestion	Rat	LD50 31,600 mg/kg
Talc	Dermal		LD50 estimated to be > 5,000 mg/kg
Talc	Ingestion		LD50 estimated to be > 5,000 mg/kg

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Urethane Prepolymer- N.J.T.S. Registry No. 04499600-7304	Dermal		LD50 estimated to be > 5,000 mg/kg
Urethane Prepolymer- N.J.T.S. Registry No. 04499600-7304	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
P,P'-Methylenebis(Phenyl Isocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation-	Rat	LC50 0.368 mg/l
	Dust/Mist		
	(4 hours)		
P,P'-Methylenebis(Phenyl Isocyanate)	Ingestion	Rat	LD50 31,600 mg/kg
1,1'-Methylenebis(Isocyanatobenzene)	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation-	Rat	LC50 0.368 mg/l
	Dust/Mist		
	(4 hours)		
1,1'-Methylenebis(Isocyanatobenzene)	Ingestion	Rat	LD50 31,600 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
Sodium Oxide	Ingestion		LD50 estimated to be 50 - 300 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polymethylene Polyphenylene Isocyanate	official	Irritant
	classifica	
	tion	
Talc	Rabbit	No significant irritation
P,P'-Methylenebis(Phenyl Isocyanate)	official	Irritant
	classifica	
	tion	
1,1'-Methylenebis(Isocyanatobenzene)	official	Irritant
	classifica	
	tion	
Amorphous Silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Polymethylene Polyphenylene Isocyanate	official	Severe irritant
	classifica	
	tion	
Talc	Rabbit	No significant irritation
P,P'-Methylenebis(Phenyl Isocyanate)	official	Severe irritant
	classifica	
	tion	
1,1'-Methylenebis(Isocyanatobenzene)	official	Severe irritant
	classifica	
	tion	
Amorphous Silica	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Polymethylene Polyphenylene Isocyanate	official	Sensitizing
	classifica	
	tion	
P,P'-Methylenebis(Phenyl Isocyanate)	official	Sensitizing
	classifica	
	tion	
1,1'-Methylenebis(Isocyanatobenzene)	official	Sensitizing
	classifica	
	tion	
Amorphous Silica	Human	Not classified
	and	
	animal	

Respiratory Sensitization

Name	Species	Value
Polymethylene Polyphenylene Isocyanate	Human	Sensitizing
Talc	Human	Not classified
P,P'-Methylenebis(Phenyl Isocyanate)	Human	Sensitizing
1,1'-Methylenebis(Isocyanatobenzene)	Human	Sensitizing

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Germ Cell Mutagenicity

Name	Route	Value
Polymethylene Polyphenylene Isocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
P,P'-Methylenebis(Phenyl Isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,1'-Methylenebis(Isocyanatobenzene)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Amorphous Silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Polymethylene Polyphenylene Isocyanate	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
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Amorphous 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
Polymethylene Polyphenylene Isocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesi s
Talc	Ingestion	Not classified for development	Rat	NOAEL 1,600 mg/kg	during organogenesi s
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesi s
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesi s
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

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Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Polymethylene Polyphenylene Isocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	
1,1'- Methylenebis(Isocyanatobe nzene)	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Polymethylene Polyphenylene Isocyanate	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	Not classified	Rat	NOAEL 18 mg/m3	113 weeks
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
1,1'- Methylenebis(Isocyanatobe nzene)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
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.

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

 Serious eye damage or eye irritation

 Skin Corrosion or Irritation

 Specific target organ toxicity (single or repeated exposure)

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

<u>Ingredient</u> Polymethylene Polyphenylene Isocyanate Polymethylene Polyphenylene Isocyanate (DIISOCYANATES (CERTAIN CHEMICALS)	<u>C.A.S. No</u> 9016-87-9 9016-87-9	<u>% by Wt</u> Trade Secret < 30 < 30
ONLY)) P,P'-Methylenebis(Phenyl Isocyanate) P,P'-Methylenebis(Phenyl Isocyanate) (Benzene, 1,1'- methylenebis[4-isocyanato-)	101-68-8 101-68-8	Trade Secret 10 - 30 10 - 30
P,P'-Methylenebis(Phenyl Isocyanate) (DIISOCYANATES (CERTAIN CHEMICALS ONLY))	101-68-8	10 - 30

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: 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

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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.

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Reason for Reissue

Conversion to GHS format SDS.

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Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M[™] Structural Adhesive Part B, PN 08101

Product Identification Numbers

LB-K000-1154-0, 41-0003-6747-8

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Base portion of a two-part general purpose structural adhesive that may be used for bonding metal, glass and plastic.

1.3. Supplier's details		
MANUFACTURER:	3M	
DIVISION:	Automotive Aftermarket	
ADDRESS:	3M Center, St. Paul, MN 55144-1000, US	А
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

Skin Sensitizer: Category 1. Reproductive Toxicity: Category 1B. Carcinogenicity: Category 2. Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements Signal word Danger

Symbols Exclamation mark | Health Hazard |

Pictograms



Hazard Statements May cause an allergic skin reaction. May damage fertility or the unborn child. Suspected of causing cancer.

Causes damage to organs through prolonged or repeated exposure: respiratory system $\quad \mid$

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. Wear protective gloves. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response:

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell.

Storage:

Store locked up.

Disposal:

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

48% of the mixture consists of ingredients of unknown acute oral toxicity. 49% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Polyester Resin - N.J.T.S. Registry No. 04499600-7301	Trade Secret*	40 - 70 Trade Secret *
Talc	14807-96-6	10 - 30 Trade Secret *
Glycols, Polypropylene	Trade Secret*	10 - 30 Trade Secret *
Titanium Dioxide	13463-67-7	5 - 10 Trade Secret *
Trimethylolpropane Poly(Oxypropylene) Triether	25723-16-4	3 - 7 Trade Secret *
Amorphous Silica	7631-86-9	0.1 - 5 Trade Secret *

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4,4'-Methylenebis(2,6-Diethylaniline)	13680-35-8	0.5 - 1.5 Trade Secret *
Dibutyltin Bis(2-Ethylhexyl Mercaptoacetate)	10584-98-2	< 1
2-Ethylhexanoic Acid	149-57-5	<= 0.2

*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 carbon dioxide or dry chemical extinguisher 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> Carbon monoxide Carbon dioxide <u>Condition</u> 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. 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

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. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

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
TIN, ORGANIC COMPOUNDS	10584-98-2	OSHA	TWA(as Sn):0.1 mg/m3	
TIN, ORGANIC COMPOUNDS	10584-98-2	ACGIH	TWA(as Sn):0.1 mg/m3;STEL(as Sn):0.2 mg/m3	SKIN, A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human carcin
Talc	14807-96-6	OSHA	TWA:2 mg/m3	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2 mg/m3	A4: Not class. as human carcin
2-Ethylhexanoic Acid	149-57-5	ACGIH	TWA(inhalable fraction and vapor):5 mg/m3	
SILICA, AMORPHOUS	7631-86-9	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Glycols, Polypropylene	Trade Secret	AIHA	TWA(as aerosol):10 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 with appropriate local exhaust ventilation. Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining. 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: Nitrile Rubber Polymer laminate

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 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 with resinous odor			
Odor threshold	No Data Available			
рН	Not Applicable			
Melting point	No Data Available			
Boiling Point	Not Applicable			
Flash Point	366.8 °F [<i>Test Method</i> :Tagliabue Closed Cup]			
	[Details: Calculated from RMs]			
Evaporation rate	Not Applicable			
Flammability (solid, gas)	Not Applicable			
Flammable Limits(LEL)	No Data Available			

Flammable Limits(UEL)	No Data Available		
Vapor Pressure	Not Applicable		
Vapor Density	Not Applicable		
Density	1.310 g/ml		
Specific Gravity	1.310 [<i>Ref Std</i> :WATER=1]		
Solubility in Water	Slight (less than 10%) [Details: Very slight]		
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	5,000 - 40,000 centipoise		
Hazardous Air Pollutants	0 lb HAPS/lb solids [Test Method:Calculated]		
Volatile Organic Compounds	0 g/l [Test Method:calculated SCAQMD rule 443.1]		
Volatile Organic Compounds	0 % weight [<i>Test Method</i> :calculated per CARB title 2]		
Percent volatile	0.00 % 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 is considered to be non reactive under normal use conditions.

10.2. Chemical stability Stable.

10.3. Possibility of hazardous reactions Hazardous polymerization will not occur.

10.4. Conditions to avoid None known.

10.5. Incompatible materials None known.

10.6. Hazardous decomposition products

Substance 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

Condition

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.

May cause additional health effects (see below).

Skin Contact:

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

Ingestion:

May be harmful if swallowed.

May cause additional health effects (see below).

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.

Reproductive/Developmental Toxicity:

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

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Polyester Resin - N.J.T.S. Registry No. 04499600-7301	Ingestion	Rat	LD50 > 15,000 mg/kg
Glycols, Polypropylene	Dermal	Rabbit	LD50 > 10,000 mg/kg
Glycols, Polypropylene	Ingestion	Rat	LD50 > 2,000 mg/kg
Talc	Dermal		LD50 estimated to be > 5,000 mg/kg
Talc	Ingestion		LD50 estimated to be > 5,000 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Trimethylolpropane Poly(Oxypropylene) Triether	Dermal	Rat	LD50 > 2,000 mg/kg
Trimethylolpropane Poly(Oxypropylene) Triether	Ingestion	Rat	LD50 > 2,500 mg/kg
Amorphous Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Amorphous Silica	Inhalation- Dust/Mist	Rat	LC50 > 0.691 mg/l

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	(4 hours)			
Amorphous Silica	Ingestion	Rat	LD50 > 5,110 mg/kg	
4,4'-Methylenebis(2,6-Diethylaniline)	Ingestion	Rat	LD50 1,901 mg/kg	
2-Ethylhexanoic Acid	Dermal	Rat	LD50 > 2,000 mg/kg	
2-Ethylhexanoic Acid	Inhalation-	Rat	LC50 > 3.54 mg/l	
	Dust/Mist			
	(4 hours)			
2-Ethylhexanoic Acid	Ingestion	Rat	LD50 1,600 mg/kg	

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Glycols, Polypropylene	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Trimethylolpropane Poly(Oxypropylene) Triether	Rabbit	No significant irritation
Amorphous Silica	Rabbit	No significant irritation
4,4'-Methylenebis(2,6-Diethylaniline)	Rabbit	Minimal irritation
2-Ethylhexanoic Acid	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Glycols, Polypropylene	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Trimethylolpropane Poly(Oxypropylene) Triether	Rabbit	Mild irritant
Amorphous Silica	Rabbit	No significant irritation
4,4'-Methylenebis(2,6-Diethylaniline)	Rabbit	No significant irritation
2-Ethylhexanoic Acid	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
Titanium Dioxide	Human	Not classified
	and	
	animal	
Amorphous Silica	Human	Not classified
	and	
	animal	

Respiratory Sensitization

Name	Species	Value
Talc	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Amorphous Silica	In Vitro	Not mutagenic
4,4'-Methylenebis(2,6-Diethylaniline)	In Vitro	Not mutagenic
2-Ethylhexanoic Acid	In Vitro	Some positive data exist, but the data are not
		sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification

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Titanium Dioxide	Ingestion	Multiple	Not carcinogenic
		animal	
		species	
Titanium Dioxide	Inhalation	Rat	Carcinogenic
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
Talc	Ingestion	Not classified for development	Rat	NOAEL 1,600 mg/kg	during organogenesi s
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
2-Ethylhexanoic Acid	Ingestion	Toxic to female reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
2-Ethylhexanoic Acid	Ingestion	Toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
2-Ethylhexanoic Acid	Ingestion	Toxic to development	Multiple animal species	NOAEL 100 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
2-Ethylhexanoic Acid	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

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	Not classified	Rat	NOAEL 18 mg/m3	113 weeks
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
Amorphous Silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
2-Ethylhexanoic Acid	Ingestion	blood liver	Not classified	Rat	NOAEL 1,068 mg/kg/day	13 weeks
2-Ethylhexanoic Acid	Ingestion	skin kidney and/or bladder	Not classified	Mouse	NOAEL 3,139 mg/kg/day	13 weeks

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information

on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Incinerate 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.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not applicable

Health Hazards	
Carcinogenicity	
Reproductive toxicity	
Specific target organ toxicity (single or repeated exposure)	

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

Ingredient Titanium Dioxide

<u>C.A.S. No.</u> 13463-67-7 Listing Carcinogen

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: 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.

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