Safety Data Sheet

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Document Group:	19-0351-7	**Version Number:**	2.07
Issue Date:	07/13/26	**Supersedes Date:**	04/30/24

Product identifier
3M™ Concrete Repair Horizontal, Gray

ID Number(s):

62-2649-1222-1, 62-2649-1233-8

7000046375, 7010309745

Recommended use
Industrial use

Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

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

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

19-0350-9, 19-0349-1

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Document Group:	19-0349-1	**Version Number:**	5.09
Issue Date:	07/13/26	**Supersedes Date:**	04/30/24

SECTION 1: Identification

1.1. Product identifier
3M™ Concrete Repair Horizontal Gray, Part B

1.2. Recommended use and restrictions on use

Recommended use
Structural adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Serious Eye Damage/Irritation: Category 2A.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 2.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |Health Hazard |

Pictograms



Hazard Statements

Causes serious eye irritation.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.

Precautionary statements

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing vapors.
Wash exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves and eye protection.

Response:
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical attention.
If eye irritation persists or if skin irritation or rash occurs: Get medical attention.
Take off contaminated clothing and wash it before reuse.

Storage:
Store locked up.

Disposal:
Dispose of contents and container in accordance with applicable local, regional, national, and international regulations.

Supplemental Information:
Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Polyether Polyol	9082-00-2	40 - 70
Tetrakis(2-hydroxypropyl)ethylenediamine	102-60-3	10 - 30 Trade Secret *
Polyol (NJTS Reg. No. 04466600-7463)	Trade Secret*	10 - 30
Amorphous Silica	68611-44-9	1 - 5
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	41556-26-7	0.1 - 1 Trade Secret *
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	0.1 - 1 Trade Secret *
Polymeric Benzotriazole	104810-48-2	0.1 - 1 Trade Secret *
Polymeric Benzotriazole II	104810-47-1	0.1 - 1 Trade Secret *
Titanium Dioxide	13463-67-7	0.1 - 1 Trade Secret *
Substituted Piperydinyl Sebacate	82919-37-7	< 0.3
N,N'-Ethylenebis-12-Hydroxystearamide	123-26-2	< 0.2

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*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

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

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) 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 oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Titanium Dioxide	13463-67-7	ACGIH	TWA(Respirable nanoscale particles):0.2 mg/m3;TWA(Respirable finescale particles):2.5 mg/m3	A3: Confirmed animal carcin.
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	ACGIH	CEIL:0.018 ppm	Danger of cutaneous absorption
Silica: Amorphous, including natural diatomaceous earth	68611-44-9	OSHA	TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields
Indirect Vented Goggles

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

Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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

Physical state	Liquid
Specific Physical Form:	Viscous
Color	Gray
Odor	Slight Ammoniacal
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*No Data Available*
Boiling Point	>=400 ºF
Flash Point	>=290 ºF [*Test Method:*Tagliabue Closed Cup]
Evaporation rate	<=1 [*Ref Std:*WATER=1]
Flammability	Not Applicable
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Relative Vapor Density	>=1 [*Ref Std:*AIR=1]
Density	1.04 g/ml
Relative Density	1.04 [*Ref Std:*WATER=1]
Solubility in Water	Negligible

Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Kinematic Viscosity	3,846 mm2/sec
Hazardous Air Pollutants	0 % weight [*Test Method:*Calculated]
Molecular weight	*No Data Available*
VOC Less H2O & Exempt Solvents	0 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part A]
VOC Less H2O & Exempt Solvents	0 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*as supplied]
VOC Less H2O & Exempt Solvents	0 % [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part A]
Particle Characteristics	*Not Applicable*

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
None known.

10.5. Incompatible materials
Strong acids
Strong oxidizing agents

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:

Respiratory Tract Irritation: 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:
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.
May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Ingredient	CAS No.	Class Description	Regulation
Titanium dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Additional Information:
Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

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	Dermal	similar compounds	LD50 > 2,000 mg/kg
Polyether Polyol	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 3.2 mg/l
Polyether Polyol	Ingestion	similar compounds	LD50 > 5,000 mg/kg
Polyol (NJTS Reg. No. 04466600-7463)	Dermal	Rat	LD50 > 2,000 mg/kg
Polyol (NJTS Reg. No. 04466600-7463)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 50 mg/l
Polyol (NJTS Reg. No. 04466600-7463)	Ingestion	Rat	LD50 4,600 mg/kg
Tetrakis(2-hydroxypropyl)ethylenediamine	Dermal	Rat	LD50 > 2,000 mg/kg
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	Rat	LD50 2,890 mg/kg
Amorphous Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Amorphous Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Amorphous Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
m-Xylene-.alpha.alpha'.-diamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
m-Xylene-.alpha.alpha'.-diamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 1.2 mg/l

m-Xylene-.alpha.alpha'.-diamine	Ingestion	Rat	LD50 980 mg/kg
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	Rat	LD50 3,125 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
Polymeric Benzotriazole	Dermal	Rat	LD50 > 2,000 mg/kg
Polymeric Benzotriazole	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Polymeric Benzotriazole	Ingestion	Rat	LD50 > 5,000 mg/kg
Polymeric Benzotriazole II	Dermal	Rat	LD50 > 2,000 mg/kg
Polymeric Benzotriazole II	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Polymeric Benzotriazole II	Ingestion	Rat	LD50 > 5,000 mg/kg
Substituted Piperydinyl Sebacate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Substituted Piperydinyl Sebacate	Ingestion	Rat	LD50 3,125 mg/kg
N,N'-Ethylenebis-12-Hydroxystearamide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.05 mg/l
N,N'-Ethylenebis-12-Hydroxystearamide	Ingestion	Rat	LD50 > 2,000 mg/kg
N,N'-Ethylenebis-12-Hydroxystearamide	Dermal	similar health hazards	LD50 Not available

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polyether Polyol	similar compounds	Minimal irritation
Polyol (NJTS Reg. No. 04466600-7463)	Rabbit	No significant irritation
Tetrakis(2-hydroxypropyl)ethylenediamine	Rabbit	No significant irritation
Amorphous Silica	Rabbit	No significant irritation
m-Xylene-.alpha.alpha'.-diamine	Rat	Corrosive
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Rabbit	Minimal irritation
Titanium Dioxide	Rabbit	No significant irritation
Polymeric Benzotriazole	Rabbit	No significant irritation
Polymeric Benzotriazole II	Rabbit	No significant irritation
Substituted Piperydinyl Sebacate	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Polyether Polyol	similar compounds	Mild irritant
Polyol (NJTS Reg. No. 04466600-7463)	Rabbit	Mild irritant
Tetrakis(2-hydroxypropyl)ethylenediamine	Rabbit	Severe irritant
Amorphous Silica	Rabbit	No significant irritation
m-Xylene-.alpha.alpha'.-diamine	Rabbit	Corrosive
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Rabbit	Mild irritant
Titanium Dioxide	Rabbit	No significant irritation
Polymeric Benzotriazole	Rabbit	No significant irritation

Polymeric Benzotriazole II	Rabbit	No significant irritation
Substituted Piperydinyl Sebacate	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Polyether Polyol	similar compounds	Not classified
Tetrakis(2-hydroxypropyl)ethylenediamine	Guinea pig	Not classified
Amorphous Silica	Human and animal	Not classified
m-Xylene-.alpha.alpha'.-diamine	Guinea pig	Sensitizing
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Guinea pig	Sensitizing
Titanium Dioxide	Human and animal	Not classified
Polymeric Benzotriazole	Guinea pig	Sensitizing
Polymeric Benzotriazole II	Guinea pig	Sensitizing
Substituted Piperydinyl Sebacate	Guinea pig	Sensitizing
N,N'-Ethylenebis-12-Hydroxystearamide	Guinea pig	Sensitizing

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
Polyether Polyol	In Vitro	Not mutagenic
Tetrakis(2-hydroxypropyl)ethylenediamine	In Vitro	Not mutagenic
Amorphous Silica	In Vitro	Not mutagenic
m-Xylene-.alpha.alpha'.-diamine	In Vitro	Not mutagenic
m-Xylene-.alpha.alpha'.-diamine	In vivo	Not mutagenic
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	In vivo	Not mutagenic
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Polymeric Benzotriazole	In Vitro	Not mutagenic
Polymeric Benzotriazole	In vivo	Not mutagenic
Polymeric Benzotriazole II	In Vitro	Not mutagenic
Polymeric Benzotriazole II	In vivo	Not mutagenic
Substituted Piperydinyl Sebacate	In vivo	Not mutagenic
Substituted Piperydinyl Sebacate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

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

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
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 organogenesis
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	premating into lactation
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg/day	48 days
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	premating into lactation
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,493 mg/kg/day	29 days
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	Not classified for development	Rat	NOAEL 209 mg/kg/day	premating into lactation
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	Toxic to female reproduction	Rat	NOAEL 804 mg/kg/day	premating into lactation
Polymeric Benzotriazole	Ingestion	Not classified for female reproduction	Rat	NOAEL 100 mg/kg/day	premating into lactation
Polymeric Benzotriazole	Ingestion	Not classified for male reproduction	Rat	NOAEL 100 mg/kg/day	115 days
Polymeric Benzotriazole	Ingestion	Not classified for development	Rat	NOAEL 2 mg/kg/day	premating into lactation
Polymeric Benzotriazole II	Ingestion	Not classified for female reproduction	Rat	NOAEL 100 mg/kg/day	premating into lactation
Polymeric Benzotriazole II	Ingestion	Not classified for male reproduction	Rat	NOAEL 100 mg/kg/day	115 days
Polymeric Benzotriazole II	Ingestion	Not classified for development	Rat	NOAEL 2 mg/kg/day	premating into lactation
Substituted Piperydinyl Sebacate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,493 mg/kg/day	29 days
Substituted Piperydinyl Sebacate	Ingestion	Not classified for development	Rat	NOAEL 209 mg/kg/day	premating into lactation
Substituted Piperydinyl Sebacate	Ingestion	Toxic to female reproduction	Rat	NOAEL 804 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Tetrakis(2-hydroxypropyl)ethylenediamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Positive	
m-Xylene-.alpha.alpha'.-diamine	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not avaliable	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Tetrakis(2-hydroxypropyl)ethylenedia	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 300 mg/kg/day	30 days

mine			classification			
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	heart	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	skin	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	immune system	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	muscles	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Tetrakis(2-hydroxypropyl)ethylenediamine	Ingestion	vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	30 days
Amorphous Silica	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Amorphous Silica	Inhalation	silicosis	Not classified	Human	NOAEL Not available	occupational exposure
m-Xylene-.alpha.alpha'.-diamine	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.005 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	heart	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	skin	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	endocrine system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	liver	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	immune system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	muscles	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	nervous system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-	Inhalation	eyes	Not classified	Rat	NOAEL 0.03	13 weeks

diamine					mg/l	
m-Xylene-.alpha.alpha'.-diamine	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Inhalation	vascular system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
m-Xylene-.alpha.alpha'.-diamine	Ingestion	endocrine system	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
m-Xylene-.alpha.alpha'.-diamine	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
m-Xylene-.alpha.alpha'.-diamine	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 150 mg/kg/day	28 days
m-Xylene-.alpha.alpha'.-diamine	Ingestion	heart	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
m-Xylene-.alpha.alpha'.-diamine	Ingestion	liver	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
m-Xylene-.alpha.alpha'.-diamine	Ingestion	immune system	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
m-Xylene-.alpha.alpha'.-diamine	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	28 days
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	liver	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	immune system	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	heart	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	nervous system	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Bis (1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Polymeric Benzotriazole	Ingestion	liver	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric Benzotriazole	Ingestion	endocrine system	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric Benzotriazole	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric Benzotriazole	Ingestion	eyes	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric Benzotriazole	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric Benzotriazole	Ingestion	respiratory system	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric Benzotriazole II	Ingestion	liver	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric Benzotriazole II	Ingestion	endocrine system	Not classified	Rat	NOAEL 50 mg/kg/day	90 days

Polymeric Benzotriazole II	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric Benzotriazole II	Ingestion	eyes	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric Benzotriazole II	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Polymeric Benzotriazole II	Ingestion	respiratory system	Not classified	Rat	NOAEL 50 mg/kg/day	90 days
Substituted Piperydinyl Sebacate	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 300 mg/kg/day	28 days
Substituted Piperydinyl Sebacate	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Substituted Piperydinyl Sebacate	Ingestion	liver	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Substituted Piperydinyl Sebacate	Ingestion	immune system	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Substituted Piperydinyl Sebacate	Ingestion	heart	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Substituted Piperydinyl Sebacate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Substituted Piperydinyl Sebacate	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Substituted Piperydinyl Sebacate	Ingestion	nervous system	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days
Substituted Piperydinyl Sebacate	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,493 mg/kg/day	29 days

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

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

SECTION 12: Ecological information

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of

handling halogenated materials. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

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

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not Applicable.

Health Hazards
Reproductive toxicity
Respiratory or Skin Sensitization
Serious eye damage or eye irritation

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

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

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 **Flammability:** 1 **Instability:** 1 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	19-0349-1	**Version Number:**	5.09
Issue Date:	07/13/26	**Supersedes Date:**	04/30/24

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Safety Data Sheet

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Document Group:	19-0350-9	**Version Number:**	7.05
Issue Date:	07/13/26	**Supersedes Date:**	10/07/22

SECTION 1: Identification

1.1. Product identifier
3M™ Concrete Repair Horizontal Gray, Part A

1.2. Recommended use and restrictions on use

Recommended use
Structural adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

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

2.2. Label elements
Signal word
Danger

Symbols
Exclamation mark |Health Hazard |

Pictograms



Hazard Statements

Causes skin irritation.
Causes serious eye 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 vapors.
Wash exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves and eye protection.
In case of inadequate ventilation wear respiratory protection.

Response:
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical attention if you feel unwell.
If experiencing respiratory symptoms or if skin irritation or rash occurs: Call a POISON CENTER or doctor.
If experiencing respiratory symptoms or if eye irritation persists: Call a POISON CENTER or doctor.
Take off contaminated clothing and wash it before reuse.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal:
Dispose of contents and container in accordance with applicable local, regional, national, and international regulations.

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

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
4,4'-diphenylmethane diisocyanate	101-68-8	30 - 60 Trade Secret *
diphenylmethanediisocyanate prepolymer	68424-09-9	15 - 40
poly(diphenylmethane-4,4'-diisocyanate)	25686-28-6	15 - 40 Trade Secret *

amorphous silica	67762-90-7	1 - 5

*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

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Allergic skin reaction (redness, swelling, blistering, and itching). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
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
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Use personal protective

equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

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. 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

For industrial/occupational use only. Not for consumer sale or use. 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 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
4,4'-diphenylmethane diisocyanate	101-68-8	OSHA	CEIL:0.2 mg/m3(0.02 ppm)	
Silica: Amorphous, including natural diatomaceous earth	67762-90-7	OSHA	TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields
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: Neoprene, Nitrile Rubber

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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

Physical state	Liquid
Specific Physical Form:	Viscous
Color	Milky White
Odor	Mild Isocyanate
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*No Data Available*
Boiling Point	>=400 ºF
Flash Point	>=290 ºF [*Test Method:*Tagliabue Closed Cup]
Evaporation rate	<=1 [*Details:*Gels with exposure to humidity.]
Flammability	Not Applicable
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*

Vapor Pressure	<=0.000004 mmHg [@ 68 ºF]
Relative Vapor Density	>=1 [*Ref Std:*AIR=1]
Density	1.11 g/ml
Relative Density	1.11 [*Ref Std:*WATER=1]
Solubility in Water	Negligible
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Kinematic Viscosity	1,802 mm2/sec
Hazardous Air Pollutants	< 60 % weight [*Test Method:*Calculated]
Molecular weight	*No Data Available*
VOC Less H2O & Exempt Solvents	0 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part B]
VOC Less H2O & Exempt Solvents	0 % [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*when used as intended with Part B]
VOC Less H2O & Exempt Solvents	0 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*as supplied]
Particle Characteristics	*Not Applicable*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

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

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

10.5. Incompatible materials
Water
Strong acids
Strong bases

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:
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.

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-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
4,4'-diphenylmethane diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-diphenylmethane diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
4,4'-diphenylmethane diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
poly(diphenylmethane-4,4'-diisocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
poly(diphenylmethane-4,4'-diisocyanate)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
poly(diphenylmethane-4,4'-diisocyanate)	Ingestion	Rat	LD50 31,600 mg/kg
amorphous silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
amorphous silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
amorphous silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-diphenylmethane diisocyanate	official classification	Irritant
poly(diphenylmethane-4,4'-diisocyanate)	official classification	Irritant
amorphous silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-diphenylmethane diisocyanate	official classification	Severe irritant
poly(diphenylmethane-4,4'-diisocyanate)	official classification	Severe irritant
amorphous silica	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
4,4'-diphenylmethane diisocyanate	Mouse	Sensitizing
poly(diphenylmethane-4,4'-diisocyanate)	Mouse	Sensitizing
amorphous silica	Human and animal	Not classified

Respiratory Sensitization

Name	Species	Value
4,4'-diphenylmethane diisocyanate	Human	Sensitizing
poly(diphenylmethane-4,4'-diisocyanate)	Human	Sensitizing

Germ Cell Mutagenicity

Name	Route	Value
4,4'-diphenylmethane diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
poly(diphenylmethane-4,4'-diisocyanate)	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
4,4'-diphenylmethane diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
poly(diphenylmethane-4,4'-diisocyanate)	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
4,4'-diphenylmethane diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
poly(diphenylmethane-4,4'-diisocyanate)	Inhalation	Not classified for development	Rat	NOAEL 0.004	during

				mg/l	organogenesis
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 organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-diphenylmethane diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
poly(diphenylmethane-4,4'-diisocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-diphenylmethane diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
poly(diphenylmethane-4,4'-diisocyanate)	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	Not classified	Human	NOAEL Not available	occupational exposure
amorphous silica	Inhalation	silicosis	Not classified	Human	NOAEL Not available	occupational exposure

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

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

SECTION 12: Ecological information

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals

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

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

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

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not Applicable.

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

Ingredient	C.A.S. No	% by Wt
4,4'-diphenylmethane diisocyanate	101-68-8	Trade Secret 30 - 60

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

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

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 **Flammability:** 1 **Instability:** 1 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address

the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	19-0350-9	**Version Number:**	7.05
Issue Date:	07/13/26	**Supersedes Date:**	10/07/22

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