

## Safety Data Sheet

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**Product identifier** 

3M<sup>TM</sup> Aerospace Sealant AC-275 B-1/2

#### **ID** Number(s):

70-0052-0193-7, 70-0052-0194-5, 70-0052-0196-0, 70-0052-0197-8, 70-0052-0198-6, 70-0052-0570-6, 70-0052-2153-9, 70-0052-2154-7, 70-0052-2155-4, 70-0052-2156-2, 70-0052-2157-0, 70-0052-2158-8

#### Recommended use

Sealant

## Supplier's details

**MANUFACTURER:** 3M

**DIVISION:** Aerospace and Commercial Transportation 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:

30-3108-5, 30-3204-2

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**Document Group:** 30-3204-2 2.00 **Version Number: Issue Date:** 02/20/15 09/06/12 **Supercedes Date:** 

## **SECTION 1: Identification**

#### 1.1. Product identifier

3M<sup>TM</sup> Aerospace Sealant AC-275 B-1/2, B-2, and B-6 Base

#### **Product Identification Numbers**

LC-B100-1086-2, LC-B100-1086-3, LC-B100-1086-4, LC-B100-1086-5, LC-B100-1086-6, LC-B100-1347-4, 42-0044-2108-9, 42-0044-2109-7, 42-0044-2110-5

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

#### Recommended use

For industrial or professional use only., Sealant

1.3. Supplier's details

**MANUFACTURER:** 

**DIVISION:** Aerospace and Commercial Transportation 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 Sensitizer: Category 1.

## 2.2. Label elements

Signal word

Warning

## **Symbols**

Exclamation mark |

#### **Pictograms**



#### **Hazard Statements**

May cause an allergic skin reaction.

#### **Precautionary Statements**

#### **Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves.

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

#### **Response:**

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

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

Wash contaminated clothing before reuse.

#### Disposal:

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

#### 2.3. Hazards not otherwise classified

None.

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

Ingredient	C.A.S. No.	% by Wt
POLYSULFIDE RUBBER	68611-50-7	55 - 65
CALCIUM CARBONATE	471-34-1	35 - 45
TITANIUM DIOXIDE	13463-67-7	1 - 5 Trade Secret *
PHENOL-FORMALDEHYDE POLYMER	9003-35-4	0.1 - 0.5 Trade Secret *
EPOXY RESIN	25085-99-8	0.01 - 0.2 Trade Secret *
QUARTZ SILICA	14808-60-7	0 - 0.15 Trade Secret *

<sup>\*</sup>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:**

No need for first aid is anticipated.

#### If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

# **SECTION 5: Fire-fighting measures**

#### 5.1. Suitable extinguishing media

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

### 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

## **Hazardous Decomposition or By-Products**

Substance
Formaldehyde
Carbon monoxide
Carbon dioxide

### **Condition**

During Combustion During Combustion During Combustion

#### 5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

## **SECTION 6: Accidental release measures**

## 6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. 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

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

## **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

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. Wash contaminated clothing before reuse.

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

D 2 6 1

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	<b>Additional Comments</b>
TITANIUM DIOXIDE	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human
				carcin
TITANIUM DIOXIDE	13463-67-7	CMRG	TWA(as respirable dust):5	
			mg/m3	
TITANIUM DIOXIDE	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
QUARTZ SILICA	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
QUARTZ SILICA	14808-60-7	OSHA	TWA concentration(as total	
			dust):0.3 mg/m3;TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.)	
CALCIUM CARBONATE	471-34-1	CMRG	TWA:10 mg/m3;STEL:20	
			mg/m3	
Limestone	471-34-1	OSHA	TWA(as total dust):15	
			mg/m3;TWA(respirable	
			fraction):5 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

### 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: Polymer laminate

Page 4 of 10

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 - polymer laminate

### **Respiratory protection**

None required.

## **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: Sulphurous odor; white paste

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

>=200 °F [Test Method: Closed Cup] **Flash Point** 

**Evaporation rate** Not Applicable Not Applicable Flammability (solid, gas) No Data Available Flammable Limits(LEL) No Data Available Flammable Limits(UEL) **Vapor Pressure** No Data Available **Vapor Density** No Data Available

**Specific Gravity** 1.63 [*Ref Std:* WATER=1]

Solubility in Water Nil

Solubility- non-water No Data Available Partition coefficient: n-octanol/ water No Data Available **Autoignition temperature** No Data Available No Data Available **Decomposition temperature** No Data Available Viscosity **Hazardous Air Pollutants** 0 % weight

Volatile Organic Compounds 4.1 g/l [Test Method: calculated SCAQMD rule 443.1] 4.2 g/l [Test Method: calculated SCAQMD rule 443.1] VOC Less H2O & Exempt Solvents

## **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

Strong bases Reducing agents

Strong acids

#### 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:**

No health effects are expected.

### **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:**

Contact with the eyes during product use is not expected to result in significant irritation.

#### Ingestion:

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

## Carcinogenicity:

<u>Ingredient</u>	CAS No.	Class Description	Regulation
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
QUARTZ SILICA	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
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**

Teute Toxicity			
Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
POLYSULFIDE RUBBER	Dermal	Rat	LD50 > 7,800 mg/kg
POLYSULFIDE RUBBER	Ingestion	Rat	LD50 > 5,000 mg/kg
CALCIUM CARBONATE	Dermal	Rat	LD50 > 2,000 mg/kg
CALCIUM CARBONATE	Inhalation-	Rat	LC50 3.0 mg/l
	Dust/Mist		
	(4 hours)		
CALCIUM CARBONATE	Ingestion	Rat	LD50 6,450 mg/kg
TITANIUM DIOXIDE	Dermal	Rabbit	LD50 > 10,000 mg/kg

TITANIUM DIOXIDE	Inhalation-	Rat	LC50 > 6.82 mg/l
	Dust/Mist		_
	(4 hours)		
TITANIUM DIOXIDE	Ingestion	Rat	LD50 > 10,000 mg/kg
PHENOL-FORMALDEHYDE POLYMER	Dermal	Rat	LD50 > 2,000 mg/kg
PHENOL-FORMALDEHYDE POLYMER	Ingestion	Rat	LD50 > 2,900 mg/kg
QUARTZ SILICA	Dermal		LD50 estimated to be > 5,000 mg/kg
QUARTZ SILICA	Ingestion		LD50 estimated to be > 5,000 mg/kg
EPOXY RESIN	Dermal	Rat	LD50 > 1,600 mg/kg
EPOXY RESIN	Ingestion	Rat	LD50 > 1,000 mg/kg

ATE = acute toxicity estimate

## **Skin Corrosion/Irritation**

Name	Species	Value
POLYSULFIDE RUBBER	Rabbit	No significant irritation
CALCIUM CARBONATE	Rabbit	No significant irritation
TITANIUM DIOXIDE	Rabbit	No significant irritation
PHENOL-FORMALDEHYDE POLYMER	Human	Mild irritant
	and	
	animal	
QUARTZ SILICA	Professio	No significant irritation
	nal	
	judgeme	
	nt	
EPOXY RESIN	Rabbit	Mild irritant

**Serious Eye Damage/Irritation** 

Name	Species	Value
POLYSULFIDE RUBBER	Rabbit	No significant irritation
CALCIUM CARBONATE	Rabbit	No significant irritation
TITANIUM DIOXIDE	Rabbit	No significant irritation
PHENOL-FORMALDEHYDE POLYMER	Human	Moderate irritant
	and	
	animal	
EPOXY RESIN	Rabbit	Moderate irritant

## **Skin Sensitization**

Name	Species	Value
POLYSULFIDE RUBBER		Not sensitizing
TITANIUM DIOXIDE	Human	Not sensitizing
	and	
	animal	
PHENOL-FORMALDEHYDE POLYMER	Human	Sensitizing
	and	
	animal	
EPOXY RESIN	Human	Sensitizing
	and	
	animal	

**Respiratory Sensitization** 

Name	Species	Value
PHENOL-FORMALDEHYDE POLYMER	Human	Some positive data exist, but the data are not sufficient for classification
EPOXY RESIN	Human	Some positive data exist, but the data are not sufficient for classification

**Germ Cell Mutagenicity** 

Name	Route	Value
TITANIUM DIOXIDE	In Vitro	Not mutagenic
TITANIUM DIOXIDE	In vivo	Not mutagenic
QUARTZ SILICA	In Vitro	Some positive data exist, but the data are not

		sufficient for classification
QUARTZ SILICA	In vivo	Some positive data exist, but the data are not
		sufficient for classification
EPOXY RESIN	In vivo	Not mutagenic
EPOXY RESIN	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
TITANIUM DIOXIDE	Ingestion	Multiple	Not carcinogenic
		animal	
		species	
TITANIUM DIOXIDE	Inhalation	Rat	Carcinogenic
QUARTZ SILICA	Inhalation	Human	Carcinogenic
		and	
		animal	
EPOXY RESIN	Dermal	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
CALCIUM CARBONATE	Ingestion	Not toxic to development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
EPOXY RESIN	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
EPOXY RESIN	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
EPOXY RESIN	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesi s
EPOXY RESIN	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation

## Target Organ(s)

Specific Target Organ Toxicity - single exposure

specific ranger Organ Toxicity - single exposure						
Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
CALCIUM CARBONATE	Inhalation	respiratory system	All data are negative	Rat	NOAEL 0.812 mg/l	90 minutes
PHENOL- FORMALDEHYDE POLYMER	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	

**Specific Target Organ Toxicity - repeated exposure** 

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
CALCIUM CARBONATE	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
TITANIUM DIOXIDE	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.010 mg/l	2 years
TITANIUM DIOXIDE	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure
PHENOL- FORMALDEHYDE POLYMER	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
QUARTZ SILICA	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

EPOXY RESIN	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
EPOXY RESIN	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
EPOXY RESIN	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 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.

Page 9 of 10

#### 311/312 Hazard Categories:

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

## **15.2. State Regulations**

Contact 3M for more information.

## 15.3. Chemical Inventories

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: 0 Special Hazards: None

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

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Page 10 of 10



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 05/28/13

## **SECTION 1: Identification**

#### 1.1. Product identifier

3M<sup>TM</sup> Aerospace Sealant AC-275 B-1/2 Catalyst

#### **Product Identification Numbers**

LC-B100-1116-1, LC-B100-1116-2, LC-B100-1116-3, LC-B100-1116-4, LC-B100-1116-5, 42-0044-2030-5

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

### Recommended use

Hardener, For industrial or professional use only.

1.3. Supplier's details

MANUFACTURER: 3M

**DIVISION:** Aerospace and Commercial Transportation 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 Corrosion/Irritation: Category 2. Reproductive Toxicity: Category 2.

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

### 2.2. Label elements

#### Signal word

Danger

#### **Symbols**

Exclamation mark | Health Hazard |

## **Pictograms**

Page 1 of 11





#### **Hazard Statements**

Causes serious eye irritation.

Causes skin irritation.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure:

nervous system respiratory system |

## **Precautionary Statements**

#### **Prevention:**

Obtain special instructions before use.

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

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

Wear protective gloves and eye/face protection.

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

Wash thoroughly after handling.

#### **Response:**

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

Continue rinsing.

If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF exposed or concerned: Get medical advice/attention.

## Storage:

Store locked up.

#### **Disposal:**

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

### 2.3. Hazards not otherwise classified

None.

7% of the mixture consists of ingredients of unknown acute oral toxicity.

9% of the mixture consists of ingredients of unknown acute dermal toxicity.

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

Ingredient	C.A.S. No.	% by Wt
MANGANESE DIOXIDE	1313-13-9	55 - 65 Trade Secret *
HYDROGENATED TERPHENYL	61788-32-7	20 - 30
PARTIALLY HYDROGENATED POLYPHENYLS	68956-74-1	0 - 10
DIPHENYLGUANIDINE	102-06-7	2 - 10 Trade Secret *
WATER	7732-18-5	1 - 5
TERPHENYL	26140-60-3	0.5 - 5

SODIUM HYDROXIDE	1310-73-2	0 - 2 Trade Secret *
DISPERSING AGENT	68412-53-3	1 - 2 Trade Secret *
ZINC OXIDE	1314-13-2	0.1 - 1

<sup>\*</sup>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> Carbon monoxide Carbon dioxide

## **Condition**

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

## **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. Avoid release to the environment. Use personal protective equipment (gloves, respirators, etc.) as required.

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

Store away from heat. Store away from acids.

## **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	<b>Additional Comments</b>
SODIUM HYDROXIDE	1310-73-2	ACGIH	CEIL:2 mg/m3	
SODIUM HYDROXIDE	1310-73-2	CMRG	TWA:2 mg/m3	
SODIUM HYDROXIDE	1310-73-2	OSHA	TWA:2 mg/m3	
MANGANESE COMPOUNDS	1313-13-9	OSHA	CEIL(as Mn):5 mg/m3	
MANGANESE, INORGANIC	1313-13-9	ACGIH	TWA(as Mn, inhalable	A4: Not class. as human
COMPOUNDS			fraction):0.1 mg/m3;TWA(as	carcin
			Mn, respirable fraction):0.02	
			mg/m3	
ZINC OXIDE	1314-13-2	ACGIH	TWA(respirable fraction):2	
			mg/m3;STEL(respirable	
			fraction):10 mg/m3	
ZINC OXIDE	1314-13-2	OSHA	TWA(as fume):5	
			mg/m3;TWA(as total dust):15	
			mg/m3;TWA(respirable	
			fraction):5 mg/m3	
TERPHENYL	26140-60-3	ACGIH	CEIL:5 mg/m3	
TERPHENYL	26140-60-3	OSHA	CEIL:9 mg/m3(1 ppm)	
HYDROGENATED	61788-32-7	ACGIH	TWA:0.5 ppm	
TERPHENYL				

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

Page 4 of 11

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

CEIL: Ceiling

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

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

#### **8.2.2.** Personal protective equipment (PPE)

#### **Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

**Indirect Vented Goggles** 

## Skin/hand protection

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

### **Respiratory protection**

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

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

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

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

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

**General Physical Form:** Liquid

Odor, Color, Grade: Slight odor; dark, viscous liquid

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

**Flash Point** >=200 °F [Test Method: Closed Cup]

**Evaporation rate** No Data Available Flammability (solid, gas) Not Applicable Flammable Limits(LEL) No Data Available Flammable Limits(UEL) No Data Available **Vapor Pressure** No Data Available **Vapor Density** >=1 [*Ref Std:* AIR=1] **Specific Gravity** 1.97 [*Ref Std:* WATER=1]

Solubility in Water

Solubility- non-water No Data Available Partition coefficient: n-octanol/ water No Data Available **Autoignition temperature** No Data Available

**Decomposition temperature**No Data Available **Viscosity**No Data Available

**Volatile Organic Compounds**0 g/l [*Test Method:* calculated SCAQMD rule 443.1] **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

Heat

## 10.5. Incompatible materials

Reducing agents Strong acids

#### 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.

#### 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.

May cause additional health effects (see below).

## **Skin Contact:**

May be harmful in contact with skin.

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

Page 6 of 11

#### **Eye Contact:**

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

#### **Ingestion:**

May be harmful if swallowed.

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

### **Additional Health Effects:**

#### Prolonged or repeated exposure may cause target organ effects:

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

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.

## Reproductive/Developmental Toxicity:

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

#### **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 2,000 - 5,000
			mg/kg
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000
			mg/kg
MANGANESE DIOXIDE	Dermal	Rat	LD50 2,000 mg/kg
MANGANESE DIOXIDE	Inhalation-	Rat	LC50 > 1.5 mg/l
	Dust/Mist		
	(4 hours)		
MANGANESE DIOXIDE	Ingestion	Rat	LD50 > 2,197 mg/kg
HYDROGENATED TERPHENYL	Dermal	Rabbit	LD50 6,800 mg/kg
HYDROGENATED TERPHENYL	Inhalation-	Rat	LC50 > 11.1 mg/l
	Dust/Mist		
	(4 hours)		
HYDROGENATED TERPHENYL	Ingestion	Rat	LD50 > 10,000 mg/kg
DIPHENYLGUANIDINE	Dermal		estimated to be > 5,000 mg/kg
DIPHENYLGUANIDINE	Inhalation-		estimated to be > 12.5 mg/l
	Dust/Mist		
DIPHENYLGUANIDINE	Inhalation-		estimated to be > 50 mg/l
	Vapor		
DIPHENYLGUANIDINE	Ingestion		estimated to be 300 - 2,000 mg/kg
TERPHENYL	Dermal	Rabbit	LD50 > 5,000 mg/kg
TERPHENYL	Inhalation-	Rat	LD50 > 3.8 mg/l
	Dust/Mist		
	(4 hours)		
TERPHENYL	Ingestion	Rat	LD50 2,304 mg/kg
DISPERSING AGENT	Ingestion	Rat	LD50 4,450
ZINC OXIDE	Dermal		LD50 estimated to be > 5,000 mg/kg
ZINC OXIDE	Inhalation-	Rat	LC50 > 5.7 mg/l
	Dust/Mist	1	
	(4 hours)		
ZINC OXIDE	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
HYDROGENATED TERPHENYL	Rabbit	No significant irritation
TERPHENYL	Rabbit	No significant irritation
SODIUM HYDROXIDE	Rabbit	Corrosive
DISPERSING AGENT	Rabbit	Irritant
ZINC OXIDE	Human	No significant irritation
	and	
	animal	

**Serious Eye Damage/Irritation** 

5011000 2 j v 2 umug v 1111000101					
Name	Species	Value			
HYDROGENATED TERPHENYL	Rabbit	No significant irritation			
TERPHENYL	Rabbit	No significant irritation			
SODIUM HYDROXIDE	Rabbit	Corrosive			
DISPERSING AGENT	Rabbit	Corrosive			
ZINC OXIDE	Rabbit	Mild irritant			

### **Skin Sensitization**

Name	Species	Value
HYDROGENATED TERPHENYL	Human	Not sensitizing
SODIUM HYDROXIDE	Human	Not sensitizing
DISPERSING AGENT	Human	Not sensitizing
ZINC OXIDE	Guinea	Some positive data exist, but the data are not
	pig	sufficient for classification

## **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
HYDROGENATED TERPHENYL	In vivo	Not mutagenic
TERPHENYL TERPHENYL	In Vitro In vivo	Not mutagenic Not mutagenic
SODIUM HYDROXIDE	In Vitro	Not mutagenic
DISPERSING AGENT ZINC OXIDE	In Vitro In Vitro	Not mutagenic  Some positive data exist, but the data are not sufficient for classification
ZINC OXIDE	In vivo	Some positive data exist, but the data are not sufficient for classification

## Carcinogenicity

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

## **Reproductive Toxicity**

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
HYDROGENATED TERPHENYL	Ingestion	Not toxic to female reproduction	Rat	NOAEL 81 mg/kg/day	2 generation
HYDROGENATED TERPHENYL	Ingestion	Not toxic to male reproduction	Rat	NOAEL 62 mg/kg/day	2 generation
HYDROGENATED TERPHENYL	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	2 generation
ZINC OXIDE	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation

#### Target Organ(s)

Specific Target Organ Toxicity - single exposure

opecine rarger organ	sun Toxicity Single exposure					
Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
SODIUM HYDROXIDE	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
HYDROGENATED TERPHENYL	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.5 mg/l	90 days
HYDROGENATED TERPHENYL	Ingestion	endocrine system   blood   liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 144 mg/kg/day	14 weeks
ZINC OXIDE	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	10 days
ZINC OXIDE	Ingestion	endocrine system   hematopoietic system   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Other	NOAEL 500 mg/kg/day	6 months

### **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**

Page 9 of 11

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

# **SECTION 15: Regulatory information**

## 15.1. US Federal Regulations

Contact 3M for more information.

## 311/312 Hazard Categories:

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

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

Ingredient MANGANESE DIOXIDE (MANGANESE COMPOUNDS)

## 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: 3 Flammability: 1 Instability: 0 Special Hazards: None

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

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Page 10 of 11

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