



## Safety Data Sheet

Copyright, 2015, 3M Company.

All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 30-3740-5 | <b>Version Number:</b>  | 2.00     |
| <b>Issue Date:</b>     | 03/03/15  | <b>Supersedes Date:</b> | 01/31/12 |

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Aerospace Sealant AC-236 C-20 PMF

#### Product Identification Numbers

70-0052-0116-8, 70-0052-0117-6, 70-0052-0119-2, 70-0052-0121-8, 70-0052-0125-9

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

##### Recommended use

For industrial or professional use only., Sealant

#### 1.3. Supplier's details

|                      |  |
|----------------------|--|
| <b>MANUFACTURER:</b> | 3M   |
| <b>DIVISION:</b>     | Aerospace and Commercial Transportation Division |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA          |
| <b>Telephone:</b>    | 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

Flammable Liquid: Category 3.

Skin Sensitizer: Category 1.

Reproductive Toxicity: Category 1B.

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

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Flame | Exclamation mark | Health Hazard |

##### Pictograms



### Hazard Statements

Flammable liquid and vapor.

May cause an allergic skin reaction.

May damage fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure:

nervous system |

respiratory system |

sensory organs |

### Precautionary Statements

#### Prevention:

Obtain special instructions before use.

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

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

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.

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

#### Response:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

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

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

#### Storage:

Store in a well-ventilated place. Keep cool.

Store locked up.

#### Disposal:

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

### 2.3. Hazards not otherwise classified

None.

3% of the mixture consists of ingredients of unknown acute inhalation toxicity.

### SECTION 3: Composition/information on ingredients

| Ingredient                  | C.A.S. No. | % by Wt                   |
|-----------------------------|------------|---------------------------|
| POLYSULFIDE RUBBER          | 68611-50-7 | 40 - 50                   |
| CALCIUM CARBONATE           | 471-34-1   | 30 - 40                   |
| TOLUENE                     | 108-88-3   | 5 - 10 Trade Secret *     |
| MANGANESE DIOXIDE           | 1313-13-9  | 5 - 10 Trade Secret *     |
| HYDROGENATED TERPHENYL      | 61788-32-7 | 1 - 5                     |
| TITANIUM DIOXIDE            | 13463-67-7 | 1 - 5 Trade Secret *      |
| PHENOL-FORMALDEHYDE POLYMER | 9003-35-4  | 0.1 - 0.5 Trade Secret *  |
| DIPHENYLGUANIDINE           | 102-06-7   | 0.1 - 0.3 Trade Secret *  |
| SODIUM HYDROXIDE            | 1310-73-2  | 0 - 0.3                   |
| QUARTZ SILICA               | 14808-60-7 | 0 - 0.3 Trade Secret *    |
| EPOXY RESIN                 | 25085-99-8 | 0.01 - 0.1 Trade Secret * |
| ZINC OXIDE                  | 1314-13-2  | < 0.02                    |

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

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

##### Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

##### Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

##### If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

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

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

#### Hazardous Decomposition or By-Products

##### Substance

Formaldehyde

##### Condition

During Combustion

Carbon monoxide  
Carbon dioxide

During Combustion  
During Combustion

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

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

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

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

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. 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 using non-sparking tools. Place in a metal 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 use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. 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. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

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

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

## **SECTION 8: Exposure controls/personal protection**

### **8.1. Control parameters**

#### **Occupational exposure limits**

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.

| <b>Ingredient</b>              | <b>C.A.S. No.</b> | <b>Agency</b> | <b>Limit type</b>   | <b>Additional Comments</b>     |
|--------------------------------|-------------------|---------------|---|--------------------------------|
| TOLUENE                        | 108-88-3          | ACGIH         | TWA:20 ppm  | A4: Not class. as human carcin |
| TOLUENE                        | 108-88-3          | CMRG          | STEL:75 ppm   | Skin Notation                  |
| TOLUENE                        | 108-88-3          | OSHA          | TWA:200 ppm;CEIL:300 ppm  |                                |
| 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 COMPOUNDS | 1313-13-9         | ACGIH         | TWA(as Mn, inhalable fraction):0.1 mg/m3;TWA(as Mn, respirable fraction):0.02 mg/m3                                   | A4: Not class. as human carcin |
| 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                                     |                                |
| 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 fraction):0.025 mg/m3  | A2: Suspected human 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  |                                |
| HYDROGENATED TERPHENYL         | 61788-32-7        | ACGIH         | TWA:0.5 ppm   |                                |

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. Use explosion-proof ventilation 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

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**

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**

|  |  |
|--|--|
| <b>General Physical Form:</b>                  | Liquid   |
| <b>Odor, Color, Grade:</b>                     | Aromatic, gray paste   |
| <b>Odor threshold</b>                          | <i>No Data Available</i>                                     |
| <b>pH</b>                                      | <i>Not Applicable</i>  |
| <b>Melting point</b>                           | <i>Not Applicable</i>  |
| <b>Boiling Point</b>                           | <i>Not Applicable</i>  |
| <b>Flash Point</b>                             | 86 °F [ <i>Test Method:</i> Closed Cup]                      |
| <b>Evaporation rate</b>                        | <i>No Data Available</i>                                     |
| <b>Flammability (solid, gas)</b>               | Not Applicable   |
| <b>Flammable Limits(LEL)</b>                   | <i>No Data Available</i>                                     |
| <b>Flammable Limits(UEL)</b>                   | <i>No Data Available</i>                                     |
| <b>Vapor Pressure</b>                          | <i>No Data Available</i>                                     |
| <b>Vapor Density</b>                           | <i>No Data Available</i>                                     |
| <b>Specific Gravity</b>                        | 1.59 [ <i>Ref Std:</i> WATER=1]                              |
| <b>Solubility in Water</b>                     | Nil  |
| <b>Solubility- non-water</b>                   | <i>No Data Available</i>                                     |
| <b>Partition coefficient: n-octanol/ water</b> | <i>No Data Available</i>                                     |
| <b>Autoignition temperature</b>                | <i>No Data Available</i>                                     |
| <b>Decomposition temperature</b>               | <i>No Data Available</i>                                     |
| <b>Viscosity</b>                               | <i>No Data Available</i>                                     |
| <b>Volatile Organic Compounds</b>              | 93.2 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1] |
| <b>VOC Less H2O &amp; Exempt Solvents</b>      | 93.5 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1] |

## SECTION 10: Stability and reactivity

#### 10.1. Reactivity

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

#### 10.2. Chemical stability

Stable.

#### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

#### 10.4. Conditions to avoid

Sparks and/or flames

Heat

#### 10.5. Incompatible materials

Reducing agents

Strong bases

Strong acids

#### 10.6. Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| 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:

May be harmful if inhaled. 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:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

##### Eye Contact:

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.

May cause additional health effects (see below).

#### Additional Health Effects:

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

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

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.

#### Carcinogenicity:

| <u>Ingredient</u>   | <u>CAS No.</u> | <u>Class Description</u>       | <u>Regulation</u>                           |
|---------------------|----------------|--------------------------------|---|
| SILICA, CRYSTALLINE | 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

| <u>Name</u>            | <u>Route</u>                   | <u>Species</u> | <u>Value</u>                                    |
|------------------------|--------------------------------|----------------|---|
| Overall product        | Dermal                         |                | No data available; calculated ATE > 5,000 mg/kg |
| 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 |
| 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-Dust/Mist (4 hours) | Rat            | LC50 3.0 mg/l                                   |
| CALCIUM CARBONATE      | Ingestion                      | Rat            | LD50 6,450 mg/kg                                |
| TOLUENE                | Dermal                         | Rat            | LD50 12,000 mg/kg                               |
| TOLUENE                | Inhalation-Vapor (4 hours)     | Rat            | LC50 30 mg/l                                    |
| TOLUENE                | Ingestion                      | Rat            | LD50 5,550 mg/kg                                |
| MANGANESE DIOXIDE      | Dermal                         | Rat            | LD50 2,000 mg/kg                                |
| MANGANESE DIOXIDE      | Inhalation-Dust/Mist (4 hours) | Rat            | LC50 > 1.5 mg/l                                 |
| MANGANESE DIOXIDE      | Ingestion                      | Rat            | LD50 > 2,197 mg/kg                              |
| HYDROGENATED TERPHENYL | Dermal                         | Rabbit         | LD50 6,800 mg/kg                                |
| HYDROGENATED TERPHENYL | Inhalation-Dust/Mist (4 hours) | Rat            | LC50 > 11.1 mg/l                                |
| HYDROGENATED TERPHENYL | Ingestion                      | Rat            | LD50 > 10,000 mg/kg                             |



|                             |                                |        |                                    |
|-----------------------------|--------------------------------|--------|------------------------------------|
| TITANIUM DIOXIDE            | Dermal                         | Rabbit | LD50 > 10,000 mg/kg                |
| TITANIUM DIOXIDE            | Inhalation-Dust/Mist (4 hours) | Rat    | LC50 > 6.82 mg/l                   |
| TITANIUM DIOXIDE            | Ingestion                      | Rat    | LD50 > 10,000 mg/kg                |
| PHENOL-FORMALDEHYDE POLYMER | Dermal                         | Rat    | LD50 > 2,000 mg/kg                 |
| PHENOL-FORMALDEHYDE POLYMER | Ingestion                      | Rat    | LD50 > 2,900 mg/kg                 |
| DIPHENYLGUANIDINE           | Dermal                         |        | estimated to be > 5,000 mg/kg      |
| DIPHENYLGUANIDINE           | Inhalation-Dust/Mist           |        | estimated to be > 12.5 mg/l        |
| DIPHENYLGUANIDINE           | Inhalation-Vapor               |        | estimated to be > 50 mg/l          |
| DIPHENYLGUANIDINE           | Ingestion                      |        | estimated to be 300 - 2,000 mg/kg  |
| QUARTZ SILICA               | Dermal                         |        | LD50 estimated to be > 5,000 mg/kg |
| QUARTZ SILICA               | Ingestion                      |        | LD50 estimated to be > 5,000 mg/kg |
| EPOXY RESIN                 | Dermal                         | Rat    | LD50 > 1,600 mg/kg                 |
| EPOXY RESIN                 | Ingestion                      | Rat    | LD50 > 1,000 mg/kg                 |
| ZINC OXIDE                  | Dermal                         |        | LD50 estimated to be > 5,000 mg/kg |
| ZINC OXIDE                  | Inhalation-Dust/Mist (4 hours) | Rat    | LC50 > 5.7 mg/l                    |
| ZINC OXIDE                  | Ingestion                      | Rat    | LD50 > 5,000 mg/kg                 |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                        | Species                | Value                     |
|-----------------------------|------------------------|---------------------------|
| POLYSULFIDE RUBBER          | Rabbit                 | No significant irritation |
| CALCIUM CARBONATE           | Rabbit                 | No significant irritation |
| TOLUENE                     | Rabbit                 | Irritant                  |
| HYDROGENATED TERPHENYL      | Rabbit                 | No significant irritation |
| TITANIUM DIOXIDE            | Rabbit                 | No significant irritation |
| PHENOL-FORMALDEHYDE POLYMER | Human and animal       | Mild irritant             |
| SODIUM HYDROXIDE            | Rabbit                 | Corrosive                 |
| QUARTZ SILICA               | Professional judgement | No significant irritation |
| EPOXY RESIN                 | Rabbit                 | Mild irritant             |
| ZINC OXIDE                  | Human and animal       | No significant irritation |

**Serious Eye Damage/Irritation**

| Name                        | Species          | Value                     |
|-----------------------------|------------------|---------------------------|
| POLYSULFIDE RUBBER          | Rabbit           | No significant irritation |
| CALCIUM CARBONATE           | Rabbit           | No significant irritation |
| TOLUENE                     | Rabbit           | Moderate irritant         |
| HYDROGENATED TERPHENYL      | Rabbit           | No significant irritation |
| TITANIUM DIOXIDE            | Rabbit           | No significant irritation |
| PHENOL-FORMALDEHYDE POLYMER | Human and animal | Moderate irritant         |
| SODIUM HYDROXIDE            | Rabbit           | Corrosive                 |
| EPOXY RESIN                 | Rabbit           | Moderate irritant         |
| ZINC OXIDE                  | Rabbit           | Mild irritant             |

**Skin Sensitization**

| Name               | Species    | Value           |
|--------------------|------------|-----------------|
| POLYSULFIDE RUBBER |            | Not sensitizing |
| TOLUENE            | Guinea pig | Not sensitizing |

|                             |                  |  |
|-----------------------------|------------------|--|
| HYDROGENATED TERPHENYL      | Human            | Not sensitizing  |
| TITANIUM DIOXIDE            | Human and animal | Not sensitizing  |
| PHENOL-FORMALDEHYDE POLYMER | Human and animal | Sensitizing  |
| SODIUM HYDROXIDE            | Human            | Not sensitizing  |
| EPOXY RESIN                 | Human and animal | Sensitizing  |
| ZINC OXIDE                  | Guinea pig       | Some positive data exist, but the data are not sufficient for classification |

**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  |
|------------------------|----------|--|
| TOLUENE                | In Vitro | Not mutagenic  |
| TOLUENE                | In vivo  | Not mutagenic  |
| HYDROGENATED TERPHENYL | In vivo  | Not mutagenic  |
| TITANIUM DIOXIDE       | In Vitro | Not mutagenic  |
| TITANIUM DIOXIDE       | In vivo  | Not mutagenic  |
| SODIUM HYDROXIDE       | In Vitro | 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 |
| ZINC OXIDE             | In Vitro | 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**

| Name             | Route      | Species                 | Value  |
|------------------|------------|-------------------------|--|
| TOLUENE          | Dermal     | Mouse                   | Some positive data exist, but the data are not sufficient for classification |
| TOLUENE          | Ingestion  | Rat                     | Some positive data exist, but the data are not sufficient for classification |
| TOLUENE          | Inhalation | 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   |
| QUARTZ SILICA    | Inhalation | Human and animal        | Carcinogenic   |
| 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 |
|------|-------|-------|---------|-------------|----------|
|------|-------|-------|---------|-------------|----------|

|                        |            |   |                         |                     | <b>Duration</b>              |
|------------------------|------------|---|-------------------------|---------------------|------------------------------|
| CALCIUM CARBONATE      | Ingestion  | Not toxic to development  | Rat                     | NOAEL 625 mg/kg/day | premating & during gestation |
| TOLUENE                | Inhalation | Some positive female reproductive data exist, but the data are not sufficient for classification        | Human                   | NOAEL Not available | occupational exposure        |
| TOLUENE                | Inhalation | Some positive male reproductive data exist, but the data are not sufficient for classification          | Rat                     | NOAEL 2.3 mg/l      | 1 generation                 |
| TOLUENE                | Ingestion  | Toxic to development  | Rat                     | LOAEL 520 mg/kg/day | during gestation             |
| TOLUENE                | Inhalation | Toxic to development  | Human                   | NOAEL Not available | poisoning and/or abuse       |
| 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                 |
| 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 organogenesis         |
| EPOXY RESIN            | Ingestion  | Not toxic to development  | Rat                     | NOAEL 750 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**

| 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             |
| TOLUENE                     | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human            | NOAEL Not available |                        |
| TOLUENE                     | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human            | NOAEL Not available |                        |
| TOLUENE                     | Inhalation | immune system                     | Some positive data exist, but the data are not sufficient for classification | Mouse            | NOAEL 0.004 mg/l    | 3 hours                |
| TOLUENE                     | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Human            | NOAEL Not available | poisoning and/or abuse |
| PHENOL-FORMALDEHYDE POLYMER | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human and animal | NOAEL Not available |                        |
| 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      |
|-------------------|------------|---|--|---------|---------------------|------------------------|
| CALCIUM CARBONATE | Inhalation | respiratory system                                  | Some positive data exist, but the data are not sufficient for classification | Human   | NOAEL Not available | occupational exposure  |
| TOLUENE           | Inhalation | auditory system   nervous system   eyes   olfactory | Causes damage to organs through prolonged or repeated exposure               | Human   | NOAEL Not available | poisoning and/or abuse |

|                             |            | system   |  |                         |                       |                       |
|-----------------------------|------------|--|--|-------------------------|-----------------------|-----------------------|
| TOLUENE                     | Inhalation | respiratory system   | Some positive data exist, but the data are not sufficient for classification | Rat                     | LOAEL 2.3 mg/l        | 15 months             |
| TOLUENE                     | Inhalation | heart   liver   kidney and/or bladder  | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 11.3 mg/l       | 15 weeks              |
| TOLUENE                     | Inhalation | endocrine system   | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 1.1 mg/l        | 4 weeks               |
| TOLUENE                     | Inhalation | immune system  | Some positive data exist, but the data are not sufficient for classification | Mouse                   | NOAEL Not available   | 20 days               |
| TOLUENE                     | Inhalation | bone, teeth, nails, and/or hair  | Some positive data exist, but the data are not sufficient for classification | Mouse                   | NOAEL 1.1 mg/l        | 8 weeks               |
| TOLUENE                     | Inhalation | hematopoietic system   vascular system   | Some positive data exist, but the data are not sufficient for classification | Human                   | NOAEL Not available   | occupational exposure |
| TOLUENE                     | Ingestion  | nervous system   | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 625 mg/kg/day   | 13 weeks              |
| TOLUENE                     | Ingestion  | heart  | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 2,500 mg/kg/day | 13 weeks              |
| TOLUENE                     | Ingestion  | liver   kidney and/or bladder  | Some positive data exist, but the data are not sufficient for classification | Multiple animal species | NOAEL 2,500 mg/kg/day | 13 weeks              |
| TOLUENE                     | Ingestion  | hematopoietic system   | Some positive data exist, but the data are not sufficient for classification | Mouse                   | NOAEL 600 mg/kg/day   | 14 days               |
| TOLUENE                     | Ingestion  | endocrine system   | Some positive data exist, but the data are not sufficient for classification | Mouse                   | NOAEL 105 mg/kg/day   | 28 days               |
| TOLUENE                     | Ingestion  | immune system  | Some positive data exist, but the data are not sufficient for classification | Mouse                   | NOAEL 105 mg/kg/day   | 4 weeks               |
| 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              |
| 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               |

|            |           |   |  |       |                     |          |
|------------|-----------|---|--|-------|---------------------|----------|
| 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**

| Name    | Value             |
|---------|-------------------|
| TOLUENE | Aspiration hazard |

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. 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):** D001 (Ignitable)

**SECTION 14: Transport Information**

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

**SECTION 15: Regulatory information****15.1. US Federal Regulations**

Contact 3M for more information.

**311/312 Hazard Categories:**

Fire Hazard - Yes   Pressure Hazard - No   Reactivity Hazard - 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):**

| <u>Ingredient</u>                       | <u>C.A.S. No</u> | <u>% by Wt</u> |
|---|------------------|----------------|
| MANGANESE DIOXIDE (MANGANESE COMPOUNDS) | 1313-13-9        | 5 - 10         |
| TOLUENE                                 | 108-88-3         | 5 - 10         |

## 15.2. State Regulations

Contact 3M for more information.

### California Proposition 65

| <u>Ingredient</u> | <u>C.A.S. No.</u> | <u>Classification</u>     |
|-------------------|-------------------|---------------------------|
| TOLUENE           | 108-88-3          | Female reproductive toxin |
| TOLUENE           | 108-88-3          | Developmental Toxin       |

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

## 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: 3 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.

|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 30-3740-5 | <b>Version Number:</b>  | 2.00     |
| <b>Issue Date:</b>     | 03/03/15  | <b>Supersedes Date:</b> | 01/31/12 |

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available

directly from 3M

**3M USA SDSs are available at [www.3M.com](http://www.3M.com)**