



## Safety Data Sheet

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Polyurethane Foam Insulation Adhesive CR-20, Part A

#### Product Identification Numbers

62-4964-8030-2, 62-4964-8031-0, 62-4964-8032-8

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

##### Recommended use

Foam Insulation Adhesive, Part A, Industrial use

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | Industrial Adhesives and Tapes 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

Acute Toxicity (inhalation): Category 4.  
Serious Eye Damage/Irritation: Category 2A.  
Skin Corrosion/Irritation: Category 2.  
Respiratory Sensitizer: Category 1.  
Skin Sensitizer: Category 1.  
Specific Target Organ Toxicity (single exposure): Category 2.  
Specific Target Organ Toxicity (respiratory irritation): Category 3.  
Specific Target Organ Toxicity (repeated exposure): Category 1.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Exclamation mark | Health Hazard |

### Pictograms



### Hazard Statements

Causes serious eye irritation.  
Causes skin irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Harmful if inhaled.  
May cause respiratory irritation.

May cause damage to organs:  
cardiovascular system |

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

### Precautionary Statements

#### Prevention:

Do not breathe dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
In case of inadequate ventilation wear respiratory protection.  
Wear protective gloves and eye/face protection.  
Do not eat, drink or smoke when using this product.  
Wash thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.

#### Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
IF exposed or concerned: Call a POISON CENTER or doctor/physician.  
Specific treatment (see Notes to Physician on this label).

#### Storage:

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

#### Disposal:

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

#### Notes to Physician:

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

**2.3. Hazards not otherwise classified**

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

10% of the mixture consists of ingredients of unknown acute inhalation toxicity.

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

| Ingredient                             | C.A.S. No.    | % by Wt                |
|--|---------------|------------------------|
| Polymeric Diphenylmethane Diisocyanate | 9016-87-9     | 40 - 50 Trade Secret * |
| 4,4'-Diphenylmethane Diisocyanate      | 101-68-8      | 25 - 45 Trade Secret * |
| Fire Retardant                         | Trade Secret* | 10 - 15 Trade Secret * |
| 1,1,1,2-Tetrafluoroethane              | 811-97-2      | 5 - 10 Trade Secret *  |
| Nitrogen                               | 7727-37-9     | 0.1 - 5 Trade Secret * |
| Diphenylmethane-2,4'-diisocyanate      | 5873-54-1     | 0.5 - 5 Trade Secret * |

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

**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation:**

Remove person to fresh air. 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**

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

**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**

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

**Hazardous Decomposition or By-Products****Substance**

Carbon monoxide  
Carbon dioxide

**Condition**

During Combustion  
During Combustion

Hydrogen Cyanide  
Oxides of Nitrogen

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. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

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

**6.3. Methods and material for containment and cleaning up**

Contain spill. 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.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

For industrial or professional use only. 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.)

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

Store in a well-ventilated place. Keep container tightly closed. Store away from heat. 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 |
|-----------------------------------|------------|-------------------------|-----------------------------|---------------------|
| FREE ISOCYANATES                  | 101-68-8   | Manufacturer determined | TWA:0.005 ppm;STEL:0.02 ppm |                     |
| 4,4'-Diphenylmethane Diisocyanate | 101-68-8   | ACGIH                   | TWA:0.005 ppm               |                     |
| 4,4'-Diphenylmethane Diisocyanate | 101-68-8   | OSHA                    | CEIL:0.2 mg/m3(0.02 ppm)    |                     |

|  |           |                         |                              |                   |
|--|-----------|-------------------------|------------------------------|-------------------|
| FREE ISOCYANATES                         | 5873-54-1 | Manufacturer determined | TWA:0.005 ppm;STEL:0.02 ppm  |                   |
| Nitrogen                                 | 7727-37-9 | ACGIH                   | Limit value not established: | simple asphyxiant |
| 1,1,1,2-Tetrafluoroethane                | 811-97-2  | AIHA                    | TWA:4240 mg/m3(1000 ppm)     |                   |
| Benzene, 1,1'-methylenebis[4-isocyanato- | 9016-87-9 | OSHA                    | CEIL:0.2 mg/m3(0.02 ppm)     |                   |
| Benzene, 1,1'-methylenebis[4-isocyanato- | 9016-87-9 | ACGIH                   | TWA:0.005 ppm                |                   |
| FREE ISOCYANATES                         | 9016-87-9 | Manufacturer determined | TWA:0.005 ppm;STEL:0.02 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.

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

**Eye/face protection**

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

Indirect Vented Goggles

**Skin/hand protection**

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

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

Nitrile Rubber

Natural Rubber

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

Apron – Nitrile

**Respiratory protection**

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

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

Half facepiece or full facepiece supplied-air respirator

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>                     | Light brown color, slight musty odor  |
| <b>Odor threshold</b>                          | <i>No Data Available</i>  |
| <b>pH</b>                                      | <i>No Data Available</i>  |
| <b>Melting point</b>                           | <i>Not Applicable</i>   |
| <b>Boiling Point</b>                           | <=0 °F  |
| <b>Flash Point</b>                             | >=200 °F  |
| <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>                          | 85.7 psi  |
| <b>Vapor Density</b>                           | 3.6 [ <i>Ref Std: AIR=1</i> ]   |
| <b>Density</b>                                 | 1.23 g/ml   |
| <b>Specific Gravity</b>                        | 1.23 [ <i>Ref Std: WATER=1</i> ]  |
| <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>Hazardous Air Pollutants</b>                | <=37 % weight [ <i>Test Method: Calculated</i> ]  |
| <b>VOC Less H2O &amp; Exempt Solvents</b>      | <=2 g/l [ <i>Test Method: calculated SCAQMD rule 443.1</i> ] [ <i>Details: when mixed as intended with Part B</i> ] |
| <b>VOC Less H2O &amp; Exempt Solvents</b>      | 0 g/l [ <i>Test Method: calculated SCAQMD rule 443.1</i> ] [ <i>Details: as supplied</i> ]                          |
| <b>Solids Content</b>                          | <=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**

Heat

Sparks and/or flames

**10.5. Incompatible materials**

Strong oxidizing agents

**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:

Harmful if inhaled.

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

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

May cause additional health effects (see below).

##### Skin Contact:

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

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

##### 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:

##### Single exposure may cause target organ effects:

Single exposure, above recommended guidelines, may cause:

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

##### 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 10 - 20 mg/l  |
| Overall product                        | Ingestion                      |         | No data available; calculated ATE > 5,000 mg/kg |
| Polymeric Diphenylmethane Diisocyanate | Inhalation-Vapor               |         | LC50 estimated to be 10 - 20 mg/l               |
| Polymeric Diphenylmethane Diisocyanate | Dermal                         | Rabbit  | LD50 > 5,000 mg/kg                              |
| Polymeric Diphenylmethane Diisocyanate | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 0.369 mg/l                                 |
| Polymeric Diphenylmethane Diisocyanate | Ingestion                      | Rat     | LD50 31,600 mg/kg                               |
| 4,4'-Diphenylmethane Diisocyanate      | Inhalation-Vapor               |         | LC50 estimated to be 10 - 20 mg/l               |
| 4,4'-Diphenylmethane Diisocyanate      | Dermal                         | Rabbit  | LD50 > 5,000 mg/kg                              |
| 4,4'-Diphenylmethane Diisocyanate      | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 0.369 mg/l                                 |
| 4,4'-Diphenylmethane Diisocyanate      | Ingestion                      | Rat     | LD50 31,600 mg/kg                               |
| Fire Retardant                         | Dermal                         | Rabbit  | LD50 > 2,000 mg/kg                              |
| Fire Retardant                         | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 estimated to be 5 - 12.5 mg/l              |
| Fire Retardant                         | Ingestion                      | Rat     | LD50 1,101 mg/kg                                |
| 1,1,1,2-Tetrafluoroethane              | Inhalation-Gas (4 hours)       | Rat     | LC50 > 359,300 ppm                              |
| Diphenylmethane-2,4'-diisocyanate      | Inhalation-Vapor               |         | LC50 estimated to be 10 - 20 mg/l               |
| Diphenylmethane-2,4'-diisocyanate      | Dermal                         | Rabbit  | LD50 > 5,000 mg/kg                              |
| Diphenylmethane-2,4'-diisocyanate      | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 0.369 mg/l                                 |
| Diphenylmethane-2,4'-diisocyanate      | Ingestion                      | Rat     | LD50 31,600 mg/kg                               |
| Nitrogen                               | Dermal                         |         | LD50 estimated to be > 5,000 mg/kg              |
| Nitrogen                               | Inhalation-Gas                 |         | LC50 estimated to be > 50,000 ppm               |
| Nitrogen                               | Ingestion                      |         | LD50 estimated to be > 5,000 mg/kg              |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                                   | Species                 | Value                     |
|--|-------------------------|---------------------------|
| Polymeric Diphenylmethane Diisocyanate | official classification | Irritant                  |
| 4,4'-Diphenylmethane Diisocyanate      | official classification | Irritant                  |
| Fire Retardant                         | Rabbit                  | Minimal irritation        |
| 1,1,1,2-Tetrafluoroethane              | Rabbit                  | No significant irritation |
| Diphenylmethane-2,4'-diisocyanate      | official classification | Irritant                  |
| Nitrogen                               | Professional judgement  | No significant irritation |

**Serious Eye Damage/Irritation**

| Name                                   | Species                 | Value           |
|--|-------------------------|-----------------|
| Polymeric Diphenylmethane Diisocyanate | official classification | Severe irritant |
| 4,4'-Diphenylmethane Diisocyanate      | official                | Severe irritant |



|                                   |                         |                           |
|-----------------------------------|-------------------------|---------------------------|
|                                   | classification          |                           |
| Fire Retardant                    | Rabbit                  | No significant irritation |
| 1,1,1,2-Tetrafluoroethane         | Rabbit                  | No significant irritation |
| Diphenylmethane-2,4'-diisocyanate | official classification | Severe irritant           |
| Nitrogen                          | Professional judgement  | No significant irritation |

**Skin Sensitization**

| Name                                   | Species                 | Value       |
|--|-------------------------|-------------|
| Polymeric Diphenylmethane Diisocyanate | official classification | Sensitizing |
| 4,4'-Diphenylmethane Diisocyanate      | official classification | Sensitizing |
| Diphenylmethane-2,4'-diisocyanate      | official classification | Sensitizing |

**Respiratory Sensitization**

| Name                                   | Species | Value       |
|--|---------|-------------|
| Polymeric Diphenylmethane Diisocyanate | Human   | Sensitizing |
| 4,4'-Diphenylmethane Diisocyanate      | Human   | Sensitizing |
| Diphenylmethane-2,4'-diisocyanate      | Human   | Sensitizing |

**Germ Cell Mutagenicity**

| Name                                   | Route    | Value  |
|--|----------|--|
| Polymeric Diphenylmethane Diisocyanate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| 4,4'-Diphenylmethane Diisocyanate      | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Diphenylmethane-2,4'-diisocyanate      | In Vitro | Some positive data exist, but the data are not sufficient for classification |

**Carcinogenicity**

| Name                                   | Route      | Species | Value  |
|--|------------|---------|--|
| Polymeric Diphenylmethane Diisocyanate | Inhalation | Rat     | Some positive data exist, but the data are not sufficient for classification |
| 4,4'-Diphenylmethane Diisocyanate      | Inhalation | Rat     | Some positive data exist, but the data are not sufficient for classification |
| Diphenylmethane-2,4'-diisocyanate      | Inhalation | Rat     | 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    |
|--|------------|--|---------|--------------------|----------------------|
| Polymeric Diphenylmethane Diisocyanate | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification | Rat     | NOAEL 0.004 mg/l   | during organogenesis |
| 4,4'-Diphenylmethane Diisocyanate      | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification | Rat     | NOAEL 0.004 mg/l   | during organogenesis |
| Fire Retardant                         | Ingestion  | Some positive reproductive/developmental data exist, but the data are not sufficient for   | Rat     | LOAEL 99 mg/kg/day | 2 generation         |

|                                   |            |  |     |                  |                      |
|-----------------------------------|------------|--|-----|------------------|----------------------|
|                                   |            | classification   |     |                  |                      |
| Diphenylmethane-2,4'-diisocyanate | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification | Rat | NOAEL 0.004 mg/l | during organogenesis |

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

| Name                                   | Route      | Target Organ(s)        | Value  | Species                 | Test Result         | Exposure Duration |
|--|------------|------------------------|--|-------------------------|---------------------|-------------------|
| Polymeric Diphenylmethane Diisocyanate | Inhalation | respiratory irritation | May cause respiratory irritation   | official classification | NOAEL Not available |                   |
| 4,4'-Diphenylmethane Diisocyanate      | Inhalation | respiratory irritation | May cause respiratory irritation   | official classification | NOAEL Not available |                   |
| Fire Retardant                         | Inhalation | nervous system         | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL Not available | 4 hours           |
| Fire Retardant                         | Ingestion  | nervous system         | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL Not available |                   |
| 1,1,1,2-Tetrafluoroethane              | Inhalation | cardiac sensitization  | May cause damage to organs   | Dog                     | NOAEL 40,000 ppm    | 5 minutes         |
| Diphenylmethane-2,4'-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 |
|--|------------|--------------------|--|---------|------------------|-------------------|
| Polymeric Diphenylmethane Diisocyanate | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat     | LOAEL 0.004 mg/l | 13 weeks          |
| 4,4'-Diphenylmethane Diisocyanate      | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat     | LOAEL 0.004 mg/l | 13 weeks          |
| Diphenylmethane-2,4'-diisocyanate      | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat     | LOAEL 0.004 mg/l | 13 weeks          |

**Aspiration Hazard**

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

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

**SECTION 12: Ecological information****Ecotoxicological information**

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

**Chemical fate information**

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

**SECTION 13: Disposal considerations****13.1. Disposal methods**

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

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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.

#### 311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - Yes 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>       |
|--|------------------|----------------------|
| Polymeric Diphenylmethane Diisocyanate   | 9016-87-9        | Trade Secret 40 - 50 |
| Polymeric Diphenylmethane Diisocyanate (Benzene, 1,1'-methylenebis[4-isocyanato-]) | 9016-87-9        | 40 - 50              |
| Polymeric Diphenylmethane Diisocyanate (DIISOCYANATES (CERTAIN CHEMICALS ONLY))    | 9016-87-9        | 40 - 50              |
| 4,4'-Diphenylmethane Diisocyanate  | 101-68-8         | Trade Secret 25 - 45 |
| 4,4'-Diphenylmethane Diisocyanate (Benzene, 1,1'-methylenebis[4-isocyanato-])      | 101-68-8         | 25 - 45              |
| 4,4'-Diphenylmethane Diisocyanate (DIISOCYANATES (CERTAIN CHEMICALS ONLY))         | 101-68-8         | 25 - 45              |

### 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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