

IPA Spray Adhesive 08/21/14

# IPA 611

## Safety Data Sheet

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

#### 1.1. Product identifier

IPA Spray Adhesive

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

##### Recommended use

Adhesive aerosol

#### 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

Flammable Aerosol: Category 1.

Serious Eye Damage/Irritation: Category 2A.

Reproductive Toxicity: Category 1B.

Simple Asphyxiant.

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

Specific Target Organ Toxicity (central nervous system): Category 3.

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

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Flame | Exclamation mark | Health Hazard |

##### Pictograms

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#### Hazard Statements

Extremely flammable aerosol.

Causes serious eye irritation.

May cause drowsiness or dizziness.

May damage fertility or the unborn child.

May displace oxygen and cause rapid suffocation.

Causes damage to organs:  
cardiovascular system |

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

#### 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.

Do not spray on an open flame or other ignition source.

Pressurized container: Do not pierce or burn, even after use.

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

Use only outdoors or in a well-ventilated area.

Wear protective gloves and eye/face protection.

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

Wash thoroughly after handling.

##### Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see Notes to Physician on this label).

##### Storage:

Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.

Keep container tightly closed.

Store locked up in a well-ventilated place.

##### 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

None.

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

| Ingredient   | C.A.S. No.    | % by Wt                |
|--|---------------|------------------------|
| Non-Hazardous Components (NJTS Reg. No. 04499600-7242) | Trade Secret* | 15 - 40 Trade Secret * |
| Dimethyl Ether   | 115-10-6      | 10 - 30 Trade Secret * |
| Acetone  | 67-64-1       | 10 - 30 Trade Secret * |
| Heptane, branched, cyclic and linear                   | 426260-76-6   | 7 - 13 Trade Secret *  |
| Hexane   | 110-54-3      | < 10 Trade Secret *    |
| Isobutane  | 75-28-5       | 5 - 10 Trade Secret *  |
| Pentane  | 109-66-0      | < 10 Trade Secret *    |
| Propane  | 74-98-6       | 3 - 7 Trade Secret *   |
| Heptane  | 142-82-5      | 1 - 5 Trade Secret *   |
| Toluene  | 108-88-3      | 0.1 - 1 Trade Secret * |
| Talc   | 14807-96-6    | < 0.2 Trade Secret *   |

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

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

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**Inhalation:**

Remove person to fresh air. Get medical attention.

**Skin Contact:**

Wash with soap and water. 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**

Use a fire fighting agent suitable for the surrounding fire.

**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

Condition

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|                               |                   |
|-------------------------------|-------------------|
| Aldehydes                     | During Combustion |
| Hydrocarbons                  | During Combustion |
| Methane                       | During Combustion |
| Carbon monoxide               | During Combustion |
| Carbon dioxide                | During Combustion |
| Ketones                       | During Combustion |
| Toxic Vapor, Gas, Particulate | 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

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam 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

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

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

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. Store away from heat. Store away from acids. Store away from oxidizing agents.

## SECTION 8: Exposure controls/personal protection

|                             |
|-----------------------------|
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|-----------------------------|

**8.1. Control parameters**

**Occupational exposure limits**

| Ingredient     | C.A.S. No. | Agency | Limit type   | Additional Comments            |
|----------------|------------|--------|--|--------------------------------|
| Toluene        | 108-88-3   | OSHA   | TWA:200 ppm;CEIL:300 ppm   |                                |
| Toluene        | 108-88-3   | ACGIH  | TWA:20 ppm   | A4: Not class. as human carcin |
| Toluene        | 108-88-3   | CMRG   | STEL:75 ppm  | Skin Notation                  |
| Pentane        | 109-66-0   | ACGIH  | TWA:1000 ppm   |                                |
| Pentane        | 109-66-0   | OSHA   | TWA:2950 mg/m3(1000 ppm)   |                                |
| Hexane         | 110-54-3   | OSHA   | TWA:1800 mg/m3(500 ppm)  |                                |
| Hexane         | 110-54-3   | ACGIH  | TWA:50 ppm   | Skin Notation                  |
| Dimethyl Ether | 115-10-6   | CMRG   | TWA:1000 ppm   |                                |
| Dimethyl Ether | 115-10-6   | AIHA   | TWA:1880 mg/m3(1000 ppm)   |                                |
| Heptane        | 142-82-5   | OSHA   | TWA:2000 mg/m3(500 ppm)  |                                |
| Heptane        | 142-82-5   | ACGIH  | TWA:400 ppm;STEL:500 ppm   |                                |
| Talc           | 14807-96-6 | OSHA   | TWA concentration(as total dust):0.3 mg/m3;TWA concentration(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.);TWA:20 millions of particles/cu. ft. |                                |
| Talc           | 14807-96-6 | ACGIH  | TWA(respirable fraction):2 mg/m3   | A4: Not class. as human carcin |
| Talc           | 14807-96-6 | CMRG   | TWA(as respirable dust):0.5 mg/m3  |                                |
| Acetone        | 67-64-1    | OSHA   | TWA:2400 mg/m3(1000 ppm)   |                                |
| Acetone        | 67-64-1    | ACGIH  | TWA:500 ppm;STEL:750 ppm   | A4: Not class. as human carcin |
| Propane        | 74-98-6    | ACGIH  | Limit value not established:   |                                |
| Propane        | 74-98-6    | OSHA   | TWA:1800 mg/m3(1000 ppm)   |                                |
| Natural gas    | 75-28-5    | ACGIH  | Limit value not established:   |                                |
| Isobutane      | 75-28-5    | ACGIH  | STEL:1000 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**

Do not remain in area where available oxygen may be reduced. 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

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#### 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

#### 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 supplied-air respirator

Organic vapor respirators may have short service life.

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

### SECTION 9: Physical and chemical properties

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

|   |   |
|---|---|
| General Physical Form:                  | Liquid  |
| Specific Physical Form:                 | Aerosol   |
| Odor, Color, Grade:                     | Various colors; strong solvent odor.              |
| Odor threshold                          | No Data Available                                 |
| pH                                      | No Data Available                                 |
| Melting point                           | No Data Available                                 |
| Boiling Point                           | -44 °F  |
| Flash Point                             | -156 °F [Test Method: Closed Cup]                 |
| Evaporation rate                        | No Data Available                                 |
| Flammability (solid, gas)               | Not Applicable                                    |
| Flammable Limits(LEL)                   | 1.8 % volume                                      |
| Flammable Limits(UEL)                   | 18 % volume                                       |
| Vapor Pressure                          | No Data Available                                 |
| Vapor Density                           | No Data Available                                 |
| Density                                 | 0.9 g/ml  |
| Specific Gravity                        | No Data Available                                 |
| Solubility In Water                     | No Data Available                                 |
| 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                                 |
| Hazardous Air Pollutants                | <=8.5 % weight                                    |
| Volatile Organic Compounds              | < 70 % [Test Method: calculated per CARB title 2] |
| Percent volatile                        | No Data Available                                 |

### 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.

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### 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

| <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. Intentional concentration and inhalation may be harmful or fatal.

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

May cause target organ effects after inhalation.

#### Skin Contact:

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

#### Eye Contact:

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

#### Ingestion:

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

May cause target organ effects after ingestion.

#### Target Organ Effects:

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**Single exposure may cause:**

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

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:**

Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

**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 > 5,000 mg/kg |
| Overall product  | Inhalation-Dust/Mist(4 hr) |               | No data available; calculated ATE 5 - 12.5 mg/l |
| Overall product  | Ingestion                  |               | No data available; calculated ATE > 5,000 mg/kg |
| Acetone  | Dermal                     | Rabbit        | LD50 > 15,688 mg/kg                             |
| Acetone  | Inhalation-Vapor (4 hours) | Rat           | LC50 76 mg/l                                    |
| Acetone  | Ingestion                  | Rat           | LD50 5,800 mg/kg                                |
| Dimethyl Ether   | Inhalation-Gas (4 hours)   | Rat           | LC50 164,000 ppm                                |
| Pentane  | Dermal                     | Rabbit        | LD50 3,000 mg/kg                                |
| Pentane  | Inhalation-Vapor (4 hours) | Rat           | LC50 > 18 mg/l                                  |
| Pentane  | Ingestion                  | Rat           | LD50 > 2,000 mg/kg                              |
| Isobutane  | Inhalation-Gas (4 hours)   | Rat           | LC50 276,000 ppm                                |
| Hexane   | Dermal                     | Rabbit        | LD50 > 2,000 mg/kg                              |
| Hexane   | Inhalation-Vapor (4 hours) | Rat           | LC50 170 mg/l                                   |
| Hexane   | Ingestion                  | Rat           | LD50 > 28,700 mg/kg                             |
| Heptane, branched, cyclic and linear                   | Dermal                     | Rabbit        | LD50 > 2,000 mg/kg                              |
| Heptane, branched, cyclic and linear                   | Inhalation-Vapor (4 hours) | Rat           | LC50 > 73.5 mg/l                                |
| Heptane, branched, cyclic and linear                   | Ingestion                  | Rat           | LD50 > 5,000 mg/kg                              |
| Propane  | Inhalation-Gas (4 hours)   | Rat           | LC50 > 200,000 ppm                              |
| Heptane  | Dermal                     | Rabbit        | LD50 3,000 mg/kg                                |
| Heptane  | Inhalation-Vapor (4 hours) | Rat           | LC50 103 mg/l                                   |
| Heptane  | Ingestion                  | Rat           | LD50 > 15,000 mg/kg                             |
| Non-Hazardous Components (NJTS Reg. No. 04499600-7242) | Dermal                     | Not available | LD50 > 2,000 mg/kg                              |
| Non-Hazardous Components (NJTS Reg. No. 04499600-7242) | Ingestion                  | Not available | LD50 > 2,000 mg/kg                              |



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|         |                            |     |                    |
|---------|----------------------------|-----|--------------------|
| 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   |
| Talc    | Dermal                     |     | LD50 Not available |
| Talc    | Ingestion                  |     | LD50 Not available |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name   | Species          | Value                     |
|--|------------------|---------------------------|
| Acetone  | Mouse            | Minimal irritation        |
| Pentane  | Rabbit           | Minimal irritation        |
| Isobutane  |                  | No significant irritation |
| Hexane   | Human and animal | Mild irritant             |
| Heptane, branched, cyclic and linear                   | Rabbit           | Mild irritant             |
| Propane  | Rabbit           | Minimal irritation        |
| Heptane  | Human            | Mild irritant             |
| Non-Hazardous Components (NJTS Reg. No. 04499600-7242) |                  | No significant irritation |
| Toluene  | Rabbit           | Irritant                  |
| Talc   | Rabbit           | No significant irritation |

**Serious Eye Damage/Irritation**

| Name   | Species | Value                     |
|--|---------|---------------------------|
| Acetone  | Rabbit  | Severe irritant           |
| Pentane  | Rabbit  | Mild irritant             |
| Isobutane  |         | No significant irritation |
| Hexane   | Rabbit  | Mild irritant             |
| Heptane, branched, cyclic and linear                   | Rabbit  | Mild irritant             |
| Propane  | Rabbit  | Mild irritant             |
| Heptane  |         | Moderate irritant         |
| Non-Hazardous Components (NJTS Reg. No. 04499600-7242) |         | No significant irritation |
| Toluene  | Rabbit  | Moderate irritant         |
| Talc   | Rabbit  | No significant irritation |

**Skin Sensitization**

| Name   | Species    | Value           |
|--|------------|-----------------|
| Pentane  | Guinea pig | Not sensitizing |
| Hexane   | Human      | Not sensitizing |
| Non-Hazardous Components (NJTS Reg. No. 04499600-7242) |            | Not sensitizing |
| Toluene  | Guinea pig | Not sensitizing |

**Respiratory Sensitization**

| Name | Species | Value           |
|------|---------|-----------------|
| Talc | Human   | Not sensitizing |

**Germ Cell Mutagenicity**

| Name           | Route    | Value  |
|----------------|----------|--|
| Acetone        | In vivo  | Not mutagenic  |
| Acetone        | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Dimethyl Ether | In Vitro | Not mutagenic  |
| Dimethyl Ether | In vivo  | Not mutagenic  |
| Pentane        | In vivo  | Not mutagenic  |
| Pentane        | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Isobutane      | In Vitro | Not mutagenic  |
| Hexane         | In Vitro | Not mutagenic  |
| Hexane         | In vivo  | Not mutagenic  |
| Propane        | In Vitro | Not mutagenic  |

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|         |          |               |
|---------|----------|---------------|
| Heptane | In Vitro | Not mutagenic |
| Toluene | In Vitro | Not mutagenic |
| Toluene | In vivo  | Not mutagenic |
| Talc    | In Vitro | Not mutagenic |
| Talc    | In vivo  | Not mutagenic |

**Carcinogenicity**

| Name           | Route         | Species                 | Value  |
|----------------|---------------|-------------------------|--|
| Acetone        | Not Specified | Multiple animal species | Not carcinogenic   |
| Dimethyl Ether | Inhalation    | Rat                     | Not carcinogenic   |
| Hexane         | Dermal        | Mouse                   | Not carcinogenic   |
| Hexane         | Inhalation    | Mouse                   | Some positive data exist, but the data are not sufficient for classification |
| 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 |
| Talc           | 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    |
|----------------|------------|--|---------|------------------------|----------------------|
| Acetone        | Ingestion  | Not toxic to female reproduction   | Mouse   | NOAEL 11,298 mg/kg/day | 13 weeks             |
| Acetone        | Ingestion  | Some positive male reproductive data exist, but the data are not sufficient for classification | Rat     | NOAEL 1,700 mg/kg/day  | 13 weeks             |
| Acetone        | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification     | Rat     | NOAEL 5.2 mg/l         | during organogenesis |
| Dimethyl Ether | Inhalation | Not toxic to female reproduction   | Rat     | NOAEL 25,000 ppm       | 2 years              |
| Dimethyl Ether | Inhalation | Not toxic to male reproduction   | Rat     | NOAEL 25,000 ppm       | 2 years              |
| Dimethyl Ether | Inhalation | Not toxic to development   | Rat     | NOAEL 40,000 ppm       | during organogenesis |
| Pentane        | Inhalation | Not toxic to female reproduction   | Rat     | NOAEL 20 mg/l          | 13 weeks             |
| Pentane        | Inhalation | Not toxic to male reproduction   | Rat     | NOAEL 20 mg/l          | 13 weeks             |
| Pentane        | Ingestion  | Not toxic to development   | Rat     | NOAEL 1,000 mg/kg/day  | during organogenesis |
| Pentane        | Inhalation | Not toxic to development   | Rat     | NOAEL 30 mg/l          | during organogenesis |
| Hexane         | Ingestion  | Not toxic to development   | Mouse   | NOAEL 2,200 mg/kg/day  | during organogenesis |
| Hexane         | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification     | Rat     | NOAEL 0.7 mg/l         | during gestation     |
| Hexane         | Ingestion  | Toxic to male reproduction   | Rat     | NOAEL 1,140 mg/kg/day  | 90 days              |
| Hexane         | Inhalation | Toxic to male reproduction   | Rat     | LOAEL 3.52 mg/l        | 28 days              |

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|         |            |  |       |                     |                        |
|---------|------------|--|-------|---------------------|------------------------|
| 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 |
| Talc    | Ingestion  | Not toxic to development   | Rat   | NOAEL 1,600 mg/kg   | during organogenesis   |

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

| Name                                 | Route      | Target Organ(s)                   | Value  | Species                 | Test Result         | Exposure Duration      |
|--------------------------------------|------------|-----------------------------------|--|-------------------------|---------------------|------------------------|
| Acetone                              | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL Not available |                        |
| Acetone                              | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human                   | NOAEL Not available |                        |
| Acetone                              | Inhalation | immune system                     | Some positive data exist, but the data are not sufficient for classification | Human                   | NOAEL 1.19 mg/l     | 6 hours                |
| Acetone                              | Inhalation | liver                             | Some positive data exist, but the data are not sufficient for classification | Guinea pig              | NOAEL Not available |                        |
| Acetone                              | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL Not available | poisoning and/or abuse |
| Dimethyl Ether                       | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Rat                     | LOAEL 10,000 ppm    | 30 minutes             |
| Dimethyl Ether                       | Inhalation | cardiac sensitization             | Some positive data exist, but the data are not sufficient for classification | Dog                     | NOAEL 100,000 ppm   | 5 minutes              |
| Pentane                              | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Multiple animal species | NOAEL Not available | not available          |
| Pentane                              | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Not available           | NOAEL Not available | not available          |
| Pentane                              | Inhalation | cardiac sensitization             | Some positive data exist, but the data are not sufficient for classification | Dog                     | NOAEL Not available | not available          |
| Isobutane                            | Inhalation | cardiac sensitization             | Causes damage to organs  | Multiple animal species | NOAEL Not available |                        |
| Isobutane                            | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human and animal        | NOAEL Not available |                        |
| Isobutane                            | Inhalation | respiratory irritation            | All data are negative  | Mouse                   | NOAEL Not available |                        |
| Hexane                               | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL Not available | not available          |
| Hexane                               | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Rabbit                  | NOAEL Not available | 8 hours                |
| Hexane                               | Inhalation | respiratory system                | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 24.6 mg/l     | 8 hours                |
| Heptane, branched, cyclic and linear | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                   | NOAEL not available |                        |
| Propane                              | Inhalation | cardiac sensitization             | Causes damage to organs  | Human                   | NOAEL Not available |                        |
| Propane                              | Inhalation | central nervous                   | May cause drowsiness or  | Human                   | NOAEL Not           |                        |

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|         |            |                                   |  |       |                     |                        |
|---------|------------|-----------------------------------|--|-------|---------------------|------------------------|
|         |            | system depression                 | dizziness  |       | available           |                        |
| Propane | Inhalation | respiratory irritation            | All data are negative  | Human | NOAEL Not available |                        |
| Heptane | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human | NOAEL Not available |                        |
| Heptane | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available |                        |
| Heptane | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Human | NOAEL Not available |                        |
| 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 |

**Specific Target Organ Toxicity - repeated exposure**

| Name           | Route      | Target Organ(s)                        | Value  | Species    | Test Result            | Exposure Duration |
|----------------|------------|--|--|------------|------------------------|-------------------|
| Acetone        | Dermal     | eyes                                   | Some positive data exist, but the data are not sufficient for classification | Guinea pig | NOAEL Not available    | 3 weeks           |
| Acetone        | Inhalation | hematopoietic system                   | Some positive data exist, but the data are not sufficient for classification | Human      | NOAEL 3 mg/l           | 6 weeks           |
| Acetone        | Inhalation | immune system                          | Some positive data exist, but the data are not sufficient for classification | Human      | NOAEL 1.19 mg/l        | 6 days            |
| Acetone        | Inhalation | kidney and/or bladder                  | Some positive data exist, but the data are not sufficient for classification | Guinea pig | NOAEL 119 mg/l         | not available     |
| Acetone        | Inhalation | heart   liver                          | All data are negative  | Rat        | NOAEL 45 mg/l          | 8 weeks           |
| Acetone        | Ingestion  | kidney and/or bladder                  | Some positive data exist, but the data are not sufficient for classification | Rat        | NOAEL 900 mg/kg/day    | 13 weeks          |
| Acetone        | Ingestion  | heart                                  | Some positive data exist, but the data are not sufficient for classification | Rat        | NOAEL 2,500 mg/kg/day  | 13 weeks          |
| Acetone        | Ingestion  | hematopoietic system                   | Some positive data exist, but the data are not sufficient for classification | Rat        | NOAEL 200 mg/kg/day    | 13 weeks          |
| Acetone        | Ingestion  | liver                                  | Some positive data exist, but the data are not sufficient for classification | Mouse      | NOAEL 3,896 mg/kg/day  | 14 days           |
| Acetone        | Ingestion  | eyes                                   | All data are negative  | Rat        | NOAEL 3,400 mg/kg/day  | 13 weeks          |
| Acetone        | Ingestion  | respiratory system                     | All data are negative  | Rat        | NOAEL 2,500 mg/kg/day  | 13 weeks          |
| Acetone        | Ingestion  | muscles                                | All data are negative  | Rat        | NOAEL 2,500 mg/kg      | 13 weeks          |
| Acetone        | Ingestion  | skin   bone, teeth, nails, and/or hair | All data are negative  | Mouse      | NOAEL 11,298 mg/kg/day | 13 weeks          |
| Dimethyl Ether | Inhalation | hematopoietic system                   | Some positive data exist, but the data are not sufficient for classification | Rat        | NOAEL 25,000 ppm       | 2 years           |
| Dimethyl Ether | Inhalation | liver                                  | Some positive data exist, but the data are not sufficient for classification | Rat        | NOAEL 20,000 ppm       | 30 weeks          |

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|           |            |   |  |       |                       |                        |
|-----------|------------|---|--|-------|-----------------------|------------------------|
| Pentane   | Inhalation | peripheral nervous system   | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available   | occupational exposure  |
| Pentane   | Inhalation | heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system | All data are negative  | Rat   | NOAEL 20 mg/l         | 13 weeks               |
| Pentane   | Ingestion  | kidney and/or bladder   | All data are negative  | Rat   | NOAEL 2,000 mg/kg/day | 28 days                |
| Isobutane | Inhalation | kidney and/or bladder   | Some positive data exist, but the data are not sufficient for classification | Rat   | NOAEL 4,500 ppm       | 13 weeks               |
| Hexane    | Inhalation | peripheral nervous system   | Causes damage to organs through prolonged or repeated exposure               | Human | NOAEL Not available   | occupational exposure  |
| Hexane    | Inhalation | respiratory system  | Some positive data exist, but the data are not sufficient for classification | Mouse | LOAEL 1.76 mg/l       | 13 weeks               |
| Hexane    | Inhalation | liver   | Some positive data exist, but the data are not sufficient for classification | Rat   | NOAEL Not available   | 6 months               |
| Hexane    | Inhalation | kidney and/or bladder   | Some positive data exist, but the data are not sufficient for classification | Rat   | LOAEL 1.76 mg/l       | 6 months               |
| Hexane    | Inhalation | hematopoietic system  | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 35.2 mg/l       | 13 weeks               |
| Hexane    | Inhalation | auditory system   immune system   eyes  | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available   | occupational exposure  |
| Hexane    | Inhalation | heart   skin   endocrine system   | All data are negative  | Rat   | NOAEL 1.76 mg/l       | 6 months               |
| Hexane    | Ingestion  | peripheral nervous system   | Some positive data exist, but the data are not sufficient for classification | Rat   | NOAEL 1,140 mg/kg/day | 90 days                |
| Hexane    | Ingestion  | endocrine system   hematopoietic system   liver   immune system   kidney and/or bladder   | Some positive data exist, but the data are not sufficient for classification | Rat   | NOAEL Not available   | 13 weeks               |
| Heptane   | Inhalation | liver   nervous system   kidney and/or bladder  | All data are negative  | Rat   | NOAEL 12 mg/l         | 26 weeks               |
| Toluene   | Inhalation | auditory system   nervous system   eyes   olfactory system  | Causes damage to organs through prolonged or repeated exposure               | Human | NOAEL Not available   | poisoning and/or abuse |
| 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                |

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|         |            |   |  |                         |                            |                       |
|---------|------------|---|--|-------------------------|----------------------------|-----------------------|
| 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               |
| Talc    | Inhalation | pneumoconiosis                          | Causes damage to organs through prolonged or repeated exposure               | Human                   | NOAEL Not available        | occupational exposure |
| Talc    | Inhalation | pulmonary fibrosis   respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 18 mg/m <sup>3</sup> | 113 weeks             |

**Aspiration Hazard**

| Name                                 | Value             |
|--------------------------------------|-------------------|
| Pentane                              | Aspiration hazard |
| Hexane                               | Aspiration hazard |
| Heptane, branched, cyclic and linear | Aspiration hazard |
| Heptane                              | Aspiration hazard |
| 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 waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Facility must be capable of handling aerosol cans. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable

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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 manufacturer for more information

#### 311/312 Hazard Categories:

Fire Hazard - Yes 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> |
|-------------------|------------------|----------------|
| Hexane (Hexane)   | 110-54-3         | < 10           |
| Hexane            | 110-54-3         | < 10           |

### 15.2. State Regulations

Contact manufacturer for more information

### 15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact manufacturer for more information

### 15.4. International Regulations

Contact manufacturer 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: 4 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.

Document Group: 30-9050-3

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**Issue Date:** 08/21/14 **Supersedes Date:** 05/27/14

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For Additional Information contact SDS Coordinator during business hours, Pacific time: (425) 889-3400

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