



## Safety Data Sheet

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### SECTION 1: Identification

#### 1.1. Product identifier

3M(TM) Electrical Insulating Sealer 1602-R, Red

#### Product Identification Numbers

80-6116-0633-8

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

##### Recommended use

Electrical

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Electrical Markets 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.  
Skin Sensitizer: Category 1.  
Reproductive Toxicity: Category 1B.  
Carcinogenicity: Category 2.  
Simple Asphyxiant.  
Specific Target Organ Toxicity (single exposure): Category 1.  
Specific Target Organ Toxicity (central nervous system): Category 3.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Flame | Exclamation mark | Health Hazard |

### Pictograms



### Hazard Statements

Extremely flammable aerosol.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause drowsiness or dizziness.

May damage fertility or the unborn child.

Suspected of causing cancer.

May displace oxygen and cause rapid suffocation.

Causes damage to organs:  
cardiovascular system |

May cause damage to organs:  
respiratory 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 eye/face protection.

Wear protective gloves.

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 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.

Wash contaminated clothing before reuse.

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.

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**

Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.

13% of the mixture consists of ingredients of unknown acute oral toxicity.

13% of the mixture consists of ingredients of unknown acute dermal toxicity.

49% of the mixture consists of ingredients of unknown acute inhalation toxicity.

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

Ingredient	C.A.S. No.	% by Wt
METHYL ACETATE	79-20-9	20 - 30 Trade Secret *
METHYL ETHYL KETONE	78-93-3	15 - 25 Trade Secret *
PROPANE	74-98-6	12 - 18 Trade Secret *
BUTANE	106-97-8	10 - 15 Trade Secret *
Resin Epoxy Ester	Trade Secret*	5 - 10
BISPHENOL A-FORMALDEHYDE RESIN	25085-75-0	2 - 6
METHYL ISOBUTYL KETONE	108-10-1	3 - 6 Trade Secret *
CALCIUM CARBONATE	471-34-1	2 - 5
N-BUTYL ACETATE	123-86-4	2 - 5 Trade Secret *
IRON OXIDE (FE2O3)	1309-37-1	2 - 5
2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE	6846-50-0	< 3
TOLUENE	108-88-3	0.3 - 0.7 Trade Secret *
Xylene	1330-20-7	<= 0.5 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 carbon dioxide extinguisher 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

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	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

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. 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

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

## 7.2. Conditions for safe storage including any incompatibilities

Store 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

### 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
BUTANE	106-97-8	ACGIH	STEL:1000 ppm	
Natural gas	106-97-8	ACGIH	Limit value not established:	
METHYL ISOBUTYL KETONE	108-10-1	ACGIH	TWA:20 ppm;STEL:75 ppm	A3: Confirmed animal carcin.
METHYL ISOBUTYL KETONE	108-10-1	OSHA	TWA:410 mg/m3(100 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
TOLUENE	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
N-BUTYL ACETATE	123-86-4	ACGIH	TWA:150 ppm;STEL:200 ppm	
N-BUTYL ACETATE	123-86-4	OSHA	TWA:710 mg/m3(150 ppm)	
IRON OXIDE (FE2O3)	1309-37-1	ACGIH	TWA(respirable fraction):5 mg/m3	A4: Not class. as human carcin
IRON OXIDE (FE2O3)	1309-37-1	OSHA	TWA(as fume):10 mg/m3	
ROUGE	1309-37-1	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Xylene	1330-20-7	ACGIH	TWA:100 ppm;STEL:150 ppm	A4: Not class. as human carcin
Xylene	1330-20-7	CMRG	TWA:50 ppm;STEL:75 ppm	
Xylene	1330-20-7	OSHA	TWA:435 mg/m3(100 ppm)	
CALCIUM CARBONATE	471-34-1	CMRG	TWA:10 mg/m3;STEL:20 mg/m3	
PROPANE	74-98-6	ACGIH	Limit value not established:	
PROPANE	74-98-6	OSHA	TWA:1800 mg/m3(1000 ppm)	
METHYL ETHYL KETONE	78-93-3	ACGIH	TWA:200 ppm;STEL:300 ppm	
METHYL ETHYL KETONE	78-93-3	OSHA	TWA:590 mg/m3(200 ppm)	
METHYL ACETATE	79-20-9	ACGIH	TWA:200 ppm;STEL:250 ppm	
METHYL ACETATE	79-20-9	OSHA	TWA:610 mg/m3(200 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

Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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

#### Skin/hand protection

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

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

#### Respiratory protection

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

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

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>Specific Physical Form:</b>	Aerosol
<b>Odor, Color, Grade:</b>	AEROSOL, RED LIQUID WITH A KETONE ODOR
<b>Odor threshold</b>	<i>No Data Available</i>
<b>Flash Point</b>	16 °F [ <i>Test Method:</i> Closed Cup] [ <i>Details:</i> Methyl acetate.]
<b>Evaporation rate</b>	<i>No Data Available</i>
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Flammable Limits(LEL)</b>	1.4 % [ <i>Details:</i> Liquid portion.]
<b>Flammable Limits(UEL)</b>	16 % [ <i>Details:</i> Liquid portion.]
<b>Vapor Pressure</b>	<i>No Data Available</i>
<b>Vapor Density</b>	<i>No Data Available</i>
<b>Specific Gravity</b>	0.8 [ <i>Ref Std:</i> WATER=1] [ <i>Details:</i> Liquid portion.]
<b>Solubility- non-water</b>	<i>No Data Available</i>
<b>Decomposition temperature</b>	<i>No Data Available</i>
<b>Percent volatile</b>	86 % volume

## 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

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	Normal Use
Ketones	Normal Use

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.

Simple Asphyxiation: Signs/symptoms may include increased heart rate, rapid respirations, drowsiness, headache, incoordination, altered judgement, nausea, vomiting, lethargy, seizures, coma, and may be fatal.

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:

Dermal Defatting: Signs/symptoms may include localized redness, itching, drying and cracking of skin. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

#### Eye Contact:

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

#### Ingestion:

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

May cause additional health effects (see below).

#### Additional Health Effects:

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

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

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

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:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
METHYL ISOBUTYL KETONE	108-10-1	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

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE 20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
METHYL ETHYL KETONE	Dermal	Rabbit	LD50 > 8,050 mg/kg
METHYL ETHYL KETONE	Inhalation-Vapor (4 hours)	Rat	LC50 34.5 mg/l
METHYL ETHYL KETONE	Ingestion	Rat	LD50 2,737 mg/kg
METHYL ACETATE	Dermal	Rat	LD50 > 2,000 mg/kg
METHYL ACETATE	Inhalation-Vapor (4 hours)	Rat	LC50 > 49 mg/l
METHYL ACETATE	Ingestion	Rat	LD50 > 5,000 mg/kg
PROPANE	Inhalation-Gas (4 hours)	Rat	LC50 > 200,000 ppm
BUTANE	Inhalation-Gas (4 hours)	Rat	LC50 277,000 ppm
METHYL ISOBUTYL KETONE	Dermal	Rabbit	LD50 > 16,000 mg/kg
METHYL ISOBUTYL KETONE	Inhalation-Vapor (4 hours)	Rat	LC50 > 8.2, < 16.4 mg/l
METHYL ISOBUTYL KETONE	Ingestion	Rat	LD50 3,038 mg/kg
N-BUTYL ACETATE	Dermal	Rabbit	LD50 > 5,000 mg/kg
N-BUTYL ACETATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 1.4 mg/l
N-BUTYL ACETATE	Inhalation-Vapor (4 hours)	Rat	LC50 > 20 mg/l
N-BUTYL ACETATE	Ingestion	Rat	LD50 > 8,800 mg/kg
IRON OXIDE (FE2O3)	Dermal	Not	LD50 3,100 mg/kg

		available	
IRON OXIDE (FE2O3)	Ingestion	Not available	LD50 3,700 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
2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE	Dermal	Guinea pig	LD50 > 18,800 mg/kg
2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 8 mg/l
2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE	Ingestion	Rat	LD50 > 3,200 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
Xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Xylene	Inhalation-Vapor (4 hours)	Rat	LC50 29 mg/l
Xylene	Ingestion	Rat	LD50 3,523 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
METHYL ETHYL KETONE	Rabbit	Minimal irritation
METHYL ACETATE	Rabbit	No significant irritation
PROPANE	Rabbit	Minimal irritation
BUTANE	Professional judgement	No significant irritation
METHYL ISOBUTYL KETONE	Rabbit	Mild irritant
N-BUTYL ACETATE	Rabbit	Minimal irritation
CALCIUM CARBONATE	Rabbit	No significant irritation
IRON OXIDE (FE2O3)	Rabbit	No significant irritation
TOLUENE	Rabbit	Irritant
Xylene	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
METHYL ETHYL KETONE	Rabbit	Severe irritant
METHYL ACETATE	Rabbit	Moderate irritant
PROPANE	Rabbit	Mild irritant
BUTANE	Rabbit	No significant irritation
METHYL ISOBUTYL KETONE	Rabbit	Mild irritant
N-BUTYL ACETATE	Rabbit	Moderate irritant
CALCIUM CARBONATE	Rabbit	No significant irritation
IRON OXIDE (FE2O3)	Rabbit	No significant irritation
TOLUENE	Rabbit	Moderate irritant
Xylene	Rabbit	Mild irritant

**Skin Sensitization**

Name	Species	Value
METHYL ACETATE	Human	Not sensitizing
METHYL ISOBUTYL KETONE	Guinea pig	Not sensitizing
N-BUTYL ACETATE	Multiple animal species	Not sensitizing

IRON OXIDE (FE2O3)	Human	Some positive data exist, but the data are not sufficient for classification
TOLUENE	Guinea pig	Not sensitizing

### Respiratory Sensitization

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

### Germ Cell Mutagenicity

Name	Route	Value
METHYL ETHYL KETONE	In Vitro	Not mutagenic
METHYL ACETATE	In Vitro	Not mutagenic
METHYL ACETATE	In vivo	Not mutagenic
PROPANE	In Vitro	Not mutagenic
BUTANE	In Vitro	Not mutagenic
METHYL ISOBUTYL KETONE	In Vitro	Not mutagenic
N-BUTYL ACETATE	In Vitro	Not mutagenic
IRON OXIDE (FE2O3)	In Vitro	Not mutagenic
TOLUENE	In Vitro	Not mutagenic
TOLUENE	In vivo	Not mutagenic
Xylene	In Vitro	Not mutagenic
Xylene	In vivo	Not mutagenic

### Carcinogenicity

Name	Route	Species	Value
METHYL ETHYL KETONE	Inhalation	Human	Not carcinogenic
METHYL ISOBUTYL KETONE	Inhalation	Multiple animal species	Carcinogenic
IRON OXIDE (FE2O3)	Inhalation	Human	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
Xylene	Dermal	Rat	Not carcinogenic
Xylene	Ingestion	Multiple animal species	Not carcinogenic
Xylene	Inhalation	Human	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
METHYL ETHYL KETONE	Inhalation	Not toxic to female reproduction	Rat	NOAEL 14.7 mg/l	90 days
METHYL ETHYL KETONE	Inhalation	Not toxic to male reproduction	Rat	NOAEL 14.7 mg/l	90 days
METHYL ETHYL KETONE	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	LOAEL 8.8 mg/l	during gestation
METHYL ISOBUTYL KETONE	Inhalation	Not toxic to female reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation
METHYL ISOBUTYL KETONE	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	13 weeks
METHYL ISOBUTYL KETONE	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for	Multiple animal	NOAEL 8.2 mg/l	2 generation

		classification	species		
METHYL ISOBUTYL KETONE	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL 12.3 mg/l	during organogenesis
N-BUTYL ACETATE	Inhalation	Not toxic to female reproduction	Rat	NOAEL 7.1 mg/l	premating & during gestation
N-BUTYL ACETATE	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 7.1 mg/l	premating & during gestation
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
Xylene	Ingestion	Not toxic to female reproduction	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Xylene	Ingestion	Not toxic to male reproduction	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Xylene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Xylene	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	during organogenesis
Xylene	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	during gestation

**Lactation**

Name	Route	Species	Value
Xylene	Ingestion	Mouse	Does not cause effects on or via lactation

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
METHYL ETHYL KETONE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
METHYL ETHYL KETONE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
METHYL ETHYL KETONE	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	not applicable
METHYL ETHYL KETONE	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,080 mg/kg	not applicable
METHYL ACETATE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
METHYL ACETATE	Inhalation	respiratory irritation	May cause respiratory irritation	Human and	NOAEL Not available	

				animal		
METHYL ACETATE	Inhalation	blindness	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
METHYL ACETATE	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
PROPANE	Inhalation	cardiac sensitization	Causes damage to organs	Human	NOAEL Not available	
PROPANE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
PROPANE	Inhalation	respiratory irritation	All data are negative	Human	NOAEL Not available	
BUTANE	Inhalation	cardiac sensitization	Causes damage to organs	Human	NOAEL Not available	
BUTANE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
BUTANE	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 5,000 ppm	25 minutes
BUTANE	Inhalation	respiratory irritation	All data are negative	Rabbit	NOAEL Not available	
METHYL ISOBUTYL KETONE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 0.10 mg/l	2 hours
METHYL ISOBUTYL KETONE	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL 0.9 mg/l	7 minutes
METHYL ISOBUTYL KETONE	Inhalation	vascular system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL Not available	not available
METHYL ISOBUTYL KETONE	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 900 mg/kg	not applicable
N-BUTYL ACETATE	Inhalation	respiratory system	May cause damage to organs	Rat	LOAEL 2.6 mg/l	4 hours
N-BUTYL ACETATE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
N-BUTYL ACETATE	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	not available
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
Xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
Xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Xylene	Inhalation	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3.5 mg/l	not available
Xylene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg	not applicable

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
METHYL ETHYL KETONE	Dermal	nervous system	All data are negative	Guinea pig	NOAEL Not available	31 weeks
METHYL ETHYL KETONE	Inhalation	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 14.7 mg/l	90 days
METHYL ETHYL KETONE	Inhalation	heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune system   muscles	All data are negative	Rat	NOAEL 14.7 mg/l	90 days
METHYL ETHYL KETONE	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	7 days
METHYL ETHYL KETONE	Ingestion	nervous system	All data are negative	Rat	NOAEL 173 mg/kg/day	90 days
METHYL ACETATE	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	28 days
METHYL ACETATE	Inhalation	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 6.1 mg/l	28 days
BUTANE	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4,489 ppm	90 days
BUTANE	Inhalation	blood	All data are negative	Rat	NOAEL 4,489 ppm	90 days
METHYL ISOBUTYL KETONE	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.41 mg/l	13 weeks
METHYL ISOBUTYL KETONE	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.8 mg/l	2 weeks
METHYL ISOBUTYL KETONE	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.4 mg/l	90 days
METHYL ISOBUTYL KETONE	Inhalation	respiratory system	All data are negative	Multiple animal species	NOAEL 4.1 mg/l	14 weeks
METHYL ISOBUTYL KETONE	Inhalation	endocrine system   hematopoietic system	All data are negative	Multiple animal species	NOAEL 0.41 mg/l	90 days
METHYL ISOBUTYL KETONE	Inhalation	nervous system	All data are negative	Multiple animal species	NOAEL 0.41 mg/l	13 weeks
METHYL ISOBUTYL KETONE	Ingestion	endocrine system   hematopoietic system   liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	13 weeks
METHYL ISOBUTYL KETONE	Ingestion	heart   immune system   muscles   nervous system   respiratory system	All data are negative	Rat	NOAEL 1,040 mg/kg/day	120 days
N-BUTYL ACETATE	Inhalation	olfactory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.4 mg/l	14 weeks
N-BUTYL ACETATE	Inhalation	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 7.26 mg/l	13 days
CALCIUM CARBONATE	Inhalation	respiratory system	Some positive data exist, but the	Human	NOAEL Not	occupational

**3M(TM) Electrical Insulating Sealer 1602-R, Red 12/16/14**

			data are not sufficient for classification		available	exposure
IRON OXIDE (FE2O3)	Inhalation	pulmonary fibrosis   pneumoconiosis	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 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
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
Xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
Xylene	Inhalation	auditory system	May cause damage to organs through prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
Xylene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
Xylene	Inhalation	heart   endocrine system   hematopoietic system   muscles   kidney and/or bladder   respiratory system	All data are negative	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
Xylene	Ingestion	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 900 mg/kg/day	2 weeks
Xylene	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,500 mg/kg/day	90 days
Xylene	Ingestion	liver	Some positive data exist, but the	Multiple	NOAEL Not	

			data are not sufficient for classification	animal species	available	
Xylene	Ingestion	heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune system   nervous system   respiratory system	All data are negative	Mouse	NOAEL 1,000 mg/kg/day	103 weeks

**Aspiration Hazard**

Name	Value
METHYL ISOBUTYL KETONE	Some positive data exist, but the data are not sufficient for classification
TOLUENE	Aspiration hazard
Xylene	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.

Incinerate in a permitted waste incineration facility. Dispose of waste product in a permitted industrial waste 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 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), D035 (Methyl ethyl ketone)

**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 - 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>
METHYL ISOBUTYL KETONE	108-10-1	3 - 6

**15.2. State Regulations**

Contact 3M for more information.

**California Proposition 65**

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
METHYL ISOBUTYL KETONE	108-10-1	Carcinogen
METHYL ISOBUTYL KETONE	108-10-1	Developmental Toxin
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.

WARNING: This product contains a chemical known to the State of California to cause cancer.

**15.3. Chemical Inventories**

The components of this product are in compliance with the chemical notification requirements of TSCA. One or more chemical components of this material have been commercialized under the TSCA polymer exemption at 40CFR723.250. Polymers subject to this exemption are not listed on the TSCA Inventory, but are in compliance with TSCA requirements.

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: 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.

**HMIS Hazard Classification**

**Health: 2 Flammability: 4 Physical Hazard: 0 Personal Protection: B**

Hazardous Material Identification System (HMIS® III) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

