



Safety Data Sheet

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Document Group:	10-5488-1	Version Number:	13.00
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Product identifier

KIT 8043-1 (NRS RUBBER ADHESIVE)

ID Number(s):

80-6100-2999-5, 80-6114-7459-6

Recommended use

Electrical

Supplier's details

MANUFACTURER:	3M
DIVISION:	Electrical Markets Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

11-4621-6, 34-7684-3

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Issue Date:	03/03/14	Supersedes Date:	12/13/12

SECTION 1: Identification

1.1. Product identifier

3M NRS RUBBER ADHESIVE

Product Identification Numbers

78-8061-7481-5, 78-8061-7482-3

1.2. Recommended use and restrictions on use

Recommended use

Electrical, SEALANT FOR ELECTRICAL SPLICES

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Electrical Markets Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Flammable Liquid: Category 2.

Serious Eye Damage/Irritation: Category 2A.

Skin Sensitizer: Category 1.

Reproductive Toxicity: Category 1B.

Carcinogenicity: Category 2.

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



Hazard Statements

Highly flammable liquid and vapor.

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.

Causes damage to organs through prolonged or repeated exposure:

nervous system |

sensory organs |

Precautionary Statements

Prevention:

Obtain special instructions before use.

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

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

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

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

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.

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

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.

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

Storage:

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

Keep cool.

Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
METHYL ETHYL KETONE	78-93-3	15 - 35
POLYCHLOROPRENE	9010-98-4	5 - 20
PHENOLIC RESIN	Trade Secret*	10 - 20
HEXANE	110-54-3	5 - 15
TOLUENE	108-88-3	5 - 10
HEPTANE	142-82-5	1 - 7
METHYLCYCLOPENTANE	96-37-7	1 - 7
MAGNESIUM OXIDE	1309-48-4	3 - 7
2-METHYLPENTANE	107-83-5	1 - 5
3-METHYLPENTANE	96-14-0	1 - 5
CYCLOHEXANE	110-82-7	< 1
ROSIN	8050-09-7	< 1
ETHYLBENZENE	100-41-4	< 0.5
Benzene	71-43-2	< 0.05

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

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

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

Skin Contact:

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

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable.

SECTION 5: Fire-fighting measures**5.1. Suitable extinguishing media**

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

5.2. Special hazards arising from the substance or mixture

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

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
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

Evacuate area. 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

Contain spill. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard. Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation.

7.2. Conditions for safe storage including any incompatibilities

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

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
ETHYLBENZENE	100-41-4	Amer Conf of Gov. Indust. Hyg.	TWA:20 ppm	
ETHYLBENZENE	100-41-4	Chemical Manufacturer Rec Guid	TWA:25 ppm;STEL:75 ppm	
ETHYLBENZENE	100-41-4	US Dept of Labor - OSHA	TWA:435 mg/m3(100 ppm)	
2-METHYLPENTANE	107-83-5	Amer Conf of Gov. Indust. Hyg.	TWA:500 ppm;STEL:1000 ppm	
TOLUENE	108-88-3	Amer Conf of Gov. Indust. Hyg.	TWA:20 ppm	
TOLUENE	108-88-3	Chemical Manufacturer Rec Guid	STEL:75 ppm	Skin Notation
TOLUENE	108-88-3	US Dept of Labor - OSHA	TWA:200 ppm;CEIL:300 ppm	
HEXANE	110-54-3	Amer Conf of Gov. Indust. Hyg.	TWA:50 ppm	Skin Notation
HEXANE	110-54-3	US Dept of Labor - OSHA	TWA:1800 mg/m3(500 ppm)	
CYCLOHEXANE	110-82-7	Amer Conf of Gov. Indust. Hyg.	TWA:100 ppm	
CYCLOHEXANE	110-82-7	US Dept of Labor - OSHA	TWA:1050 mg/m3(300 ppm)	
MAGNESIUM OXIDE	1309-48-4	Amer Conf of Gov. Indust. Hyg.	TWA(inhalable fraction):10 mg/m3	
MAGNESIUM OXIDE	1309-48-4	US Dept of Labor - OSHA	TWA(as total particulates):15 mg/m3	
HEPTANE	142-82-5	Amer Conf of Gov. Indust. Hyg.	TWA:400 ppm;STEL:500 ppm	
HEPTANE	142-82-5	US Dept of Labor - OSHA	TWA:2000 mg/m3(500 ppm)	
Benzene	71-43-2	Amer Conf of Gov. Indust. Hyg.	TWA:0.5 ppm;STEL:2.5 ppm	Skin Notation
Benzene	71-43-2	US Dept of Labor - OSHA	TWA:1 ppm;TWA:10 ppm;STEL:5 ppm;CEIL:25 ppm	29 CFR 1910.1028
METHYL ETHYL KETONE	78-93-3	Amer Conf of Gov. Indust.	TWA:200 ppm;STEL:300 ppm	

METHYL ETHYL KETONE	78-93-3	Hyg. US Dept of Labor - OSHA	TWA:590 mg/m3(200 ppm)	
ROSIN	8050-09-7	Amer Conf of Gov. Indust. Hyg.	Limit value not established:	Cntrl all exposr-low as possib, Sensitizer
3-METHYLPENTANE	96-14-0	Amer Conf of Gov. Indust. Hyg.	TWA:500 ppm;STEL:1000 ppm	

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists
 American Indust. Hygiene Assoc : American Industrial Hygiene Association
 Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines
 US Dept of Labor - 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 appropriate local exhaust ventilation on open containers. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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: Fluoroelastomer
 Polymer laminate

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

Respiratory protection

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

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

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Odor, Color, Grade:	Yellow, syrup-like, sweet petroleum odor
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>No Data Available</i>
Boiling Point	148 - 189 °F
Flash Point	-6 °F [<i>Test Method:</i> Tagliabue Closed Cup]
Evaporation rate	>= 2.5
Flammability (solid, gas)	Not Applicable
Vapor Pressure	<= 27 psia [@ 131 °F]
Density	0.876 g/ml
Specific Gravity	0.876 [<i>Ref Std:</i> WATER=1] [<i>Details:</i> Ref Std: Water = 1]
Solubility in Water	Slight (less than 10%)
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	3,995 centistoke - 6,843 centistoke [@ 73.4 °C]
Hazardous Air Pollutants	8.05 % weight
Volatile Organic Compounds	557 g/l [<i>Details:</i> Test Method: calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	559 g/l [<i>Details:</i> Test Method: calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity**10.1. Reactivity**

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat
Sparks and/or flames

10.5. Incompatible materials

Finely divided active metals
Reactive metals
Strong acids
Strong bases
Strong oxidizing agents

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	Not Specified
Carbon monoxide	Oxidative Degradation

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

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

May cause target organ effects after inhalation.

Skin Contact:

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

Eye Contact:

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:

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.

Prolonged or repeated exposure may cause:

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

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

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

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

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

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	C.A.S. No.	Class Description	Regulation
Benzene	71-43-2	Cancer hazard	OSHA Carcinogens
Benzene	71-43-2	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Benzene	71-43-2	Known human carcinogen	National Toxicology Program Carcinogens
ETHYLBENZENE	100-41-4	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	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
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
PHENOLIC RESIN	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
POLYCHLOROPRENE	Dermal		LD50 estimated to be > 5,000 mg/kg
POLYCHLOROPRENE	Ingestion	Rat	LD50 > 20,000 mg/kg
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
METHYLCYCLOPENTANE	Ingestion	Rat	LD50 > 5,000 mg/kg
TOLUENE	Dermal	Rat	LD50 12,000 mg/kg
TOLUENE	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
TOLUENE	Ingestion	Rat	LD50 2,600 mg/kg
2-METHYLPENTANE	Dermal		LD50 estimated to be > 5,000 mg/kg
2-METHYLPENTANE	Inhalation-Vapor		LC50 estimated to be > 50 mg/l
2-METHYLPENTANE	Ingestion		LD50 estimated to be > 5,000 mg/kg
3-METHYLPENTANE	Dermal		LD50 estimated to be > 5,000 mg/kg
3-METHYLPENTANE	Inhalation-Vapor		LC50 estimated to be > 50 mg/l
3-METHYLPENTANE	Ingestion		LD50 estimated to be > 5,000 mg/kg
MAGNESIUM OXIDE	Ingestion	Rat	LD50 3,870 mg/kg
CYCLOHEXANE	Dermal	Rat	LD50 > 2,000 mg/kg
CYCLOHEXANE	Inhalation-Vapor (4 hours)	Rat	LC50 > 32.9 mg/l
CYCLOHEXANE	Ingestion	Rat	LD50 6,200 mg/kg
ROSIN	Dermal	Rabbit	LD50 > 2,500 mg/kg
ROSIN	Ingestion	Rat	LD50 7,600 mg/kg
ETHYLBENZENE	Dermal	Rabbit	LD50 15,433 mg/kg
ETHYLBENZENE	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
ETHYLBENZENE	Ingestion	Rat	LD50 4,769 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
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METHYL ETHYL KETONE	Rabbit	Minimal irritation
HEXANE	Human and animal	Mild irritant
POLYCHLOROPRENE	Human	No significant irritation
HEPTANE	Human	Mild irritant
METHYLCYCLOPENTANE	similar compounds	Minimal irritation
TOLUENE	Rabbit	Irritant
2-METHYLPENTANE		Mild irritant
3-METHYLPENTANE		Mild irritant
MAGNESIUM OXIDE		No significant irritation
CYCLOHEXANE	Rabbit	Mild irritant
ETHYLBENZENE	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
METHYL ETHYL KETONE	Rabbit	Severe irritant
HEXANE	Rabbit	Mild irritant
POLYCHLOROPRENE		No significant irritation
HEPTANE		Moderate irritant
METHYLCYCLOPENTANE	similar compounds	Mild irritant
TOLUENE	Rabbit	Moderate irritant
2-METHYLPENTANE		Moderate irritant
3-METHYLPENTANE		Moderate irritant
CYCLOHEXANE	Rabbit	Mild irritant
ETHYLBENZENE	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
HEXANE	Human	Not sensitizing
TOLUENE	Guinea pig	Not sensitizing
ETHYLBENZENE	Human	Not sensitizing

Respiratory Sensitization

Name	Species	Value
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Germ Cell Mutagenicity

Name	Route	Value
METHYL ETHYL KETONE	In Vitro	Not mutagenic
HEXANE	In Vitro	Not mutagenic
HEXANE	In vivo	Not mutagenic
HEPTANE	In Vitro	Not mutagenic
TOLUENE	In Vitro	Not mutagenic
TOLUENE	In vivo	Not mutagenic
MAGNESIUM OXIDE	In Vitro	Not mutagenic
CYCLOHEXANE	In Vitro	Not mutagenic
CYCLOHEXANE	In vivo	Some positive data exist, but the data are not sufficient for classification
ETHYLBENZENE	In vivo	Not mutagenic
ETHYLBENZENE	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
METHYL ETHYL KETONE	Inhalation	Human	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
MAGNESIUM OXIDE	Not Specified	Human and animal	Some positive data exist, but the data are not sufficient for classification
ETHYLBENZENE	Inhalation	Multiple animal species	Carcinogenic

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
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
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
CYCLOHEXANE	Inhalation	Not toxic to female reproduction	Rat	NOAEL 24 mg/l	2 generation
CYCLOHEXANE	Inhalation	Not toxic to male reproduction	Rat	NOAEL 24 mg/l	2 generation
CYCLOHEXANE	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 6.9 mg/l	2 generation
ETHYLBENZENE	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 4.3 mg/l	prematuring & during gestation

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	Human	NOAEL Not available	

			classification			
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
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	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	
METHYLCYCLOPENTANE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	similar compounds	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
2-METHYLPENTANE	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
2-METHYLPENTANE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2-METHYLPENTANE	Inhalation	cardiac sensitization	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL Not available	
3-METHYLPENTANE	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
3-METHYLPENTANE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
3-METHYLPENTANE	Inhalation	cardiac sensitization	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL Not available	
MAGNESIUM OXIDE	Inhalation	respiratory system	All data are negative	Human	NOAEL Not available	
CYCLOHEXANE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
CYCLOHEXANE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
ETHYLBENZENE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ETHYLBENZENE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure
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						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
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
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

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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
2-METHYLPENTANE	Inhalation	peripheral nervous system	All data are negative	Rat	NOAEL 5.3 mg/l	14 weeks
2-METHYLPENTANE	Ingestion	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	8 weeks
2-METHYLPENTANE	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2,000 mg/kg	28 days
3-METHYLPENTANE	Inhalation	peripheral nervous system	All data are negative	Rat	NOAEL 5.3 mg/l	14 weeks
3-METHYLPENTANE	Ingestion	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	8 weeks
3-METHYLPENTANE	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2,000 mg/kg	28 days
CYCLOHEXANE	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 24 mg/l	90 days
CYCLOHEXANE	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.7 mg/l	90 days
CYCLOHEXANE	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 2.7 mg/l	10 weeks
CYCLOHEXANE	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 24 mg/l	14 weeks
CYCLOHEXANE	Inhalation	peripheral nervous system	All data are negative	Rat	NOAEL 8.6 mg/l	30 weeks
ETHYLBENZENE	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	2 years
ETHYLBENZENE	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
ETHYLBENZENE	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3.4 mg/l	28 days
ETHYLBENZENE	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.4 mg/l	5 days
ETHYLBENZENE	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 3.3 mg/l	103 weeks
ETHYLBENZENE	Inhalation	bone, teeth, nails, and/or hair	All data are negative	Multiple animal	NOAEL 4.2 mg/l	90 days

ETHYLBENZENE	Inhalation	muscles heart immune system respiratory system	All data are negative	species Multiple animal species	NOAEL 3.3 mg/l	2 years
ETHYLBENZENE	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 680 mg/kg/day	6 months

Aspiration Hazard

Name	Value
HEXANE	Aspiration hazard
HEPTANE	Aspiration hazard
METHYLCYCLOPENTANE	Aspiration hazard
TOLUENE	Aspiration hazard
2-METHYLPENTANE	Aspiration hazard
3-METHYLPENTANE	Aspiration hazard
CYCLOHEXANE	Aspiration hazard
ETHYLBENZENE	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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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): D001 (Ignitable), D018 (Benzene), 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 - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

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

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
TOLUENE	108-88-3	5 - 10
HEXANE	110-54-3	5 - 15
HEXANE (Hexane)	110-54-3	5 - 15
ETHYLBENZENE	100-41-4	< 0.5

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Formaldehyde	50-00-0	Carcinogen
ETHYLBENZENE	100-41-4	Carcinogen
TOLUENE	108-88-3	Female reproductive toxin
TOLUENE	108-88-3	Developmental Toxin
Benzene	71-43-2	Male reproductive toxin
Benzene	71-43-2	Carcinogen
Benzene	71-43-2	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 material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

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: 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.

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