Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
3M™ General Trim Adhesive, PN 39187

Product Identification Numbers
60-4550-8984-1
7010328464

1.2. Recommended use and restrictions on use

Recommended use
Automotive, Aerosol Spray Adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
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

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification
Aerosol Category 1
Serious Eye Damage/Irritation: Category 2B.
Reproductive Toxicity: Category 2.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Simple Asphyxiants: Category 1.

2.2. Label elements
Signal word
Danger

Symbols
Flame |Exclamation mark |Health Hazard |

Pictograms



Hazard Statements
Extremely flammable aerosol.
Pressurized container: may burst if heated.

Causes eye irritation.
Suspected of damaging fertility or the unborn child.
May cause drowsiness or dizziness.
May cause respiratory irritation.
May displace oxygen and cause rapid suffocation.
Causes damage to organs: cardiovascular system.

Precautionary statements
General:
Keep out of reach of children.

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not spray on an open flame or other ignition source.
Do not pierce or burn, even after use.
Do not breathe spray.
Wash exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves.

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 exposed or concerned: Call a POISON CENTER or doctor.
If eye irritation persists: Get medical advice.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 122°F (50°C).

Disposal:
Dispose of contents and container in accordance with applicable local, regional, national, and international regulations.

Notes to Physician:
Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

Supplemental Information:
Intentional concentration and inhalation may be harmful or fatal.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Methyl Acetate	79-20-9	15 - 40 Trade Secret *
Non-Hazardous Components (NJTS Reg. No. 04499600-7411)	Trade Secret*	15 - 30
Dimethyl Ether	115-10-6	7 - 13 Trade Secret *
Propane	74-98-6	7 - 13 Trade Secret *
Hexamethyldisiloxane	107-46-0	1 - 10
1,1-Difluoroethane	75-37-6	1 - 5 Trade Secret *
Cyclohexane	110-82-7	1 - 5 Trade Secret *
N-Butyl Acetate	123-86-4	0.5 - 1.5 Trade Secret *
Morpholine	110-91-8	0.1 - 1 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:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

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

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

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details.

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. Exposure to extreme heat can give rise to thermal decomposition.

Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Fluoride	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. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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. Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions
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. 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 in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not breathe thermal decomposition products. Keep out of reach of children. 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 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 50°C/122°F. 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
Cyclohexane	110-82-7	ACGIH	TWA:100 ppm	
Cyclohexane	110-82-7	OSHA	TWA:1050 mg/m3(300 ppm)	
Morpholine	110-91-8	ACGIH	TWA:20 ppm	A4: Not class. as human carcin, Danger of cutaneous absorption
Morpholine	110-91-8	OSHA	TWA:70 mg/m3(20 ppm)	SKIN
Dimethyl Ether	115-10-6	AIHA	TWA:1880 mg/m3(1000 ppm)	
Butyl acetates, all isomers	123-86-4	ACGIH	TWA:50 ppm;STEL:150 ppm	
N-Butyl Acetate	123-86-4	OSHA	TWA:710 mg/m3(150 ppm)	
Propane	74-98-6	ACGIH	Limit value not established:	simple asphyxiant
Propane	74-98-6	OSHA	TWA:1800 mg/m3(1000 ppm)	
1,1-Difluoroethane	75-37-6	AIHA	TWA:2700 mg/m3(1000 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 curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust ventilation sufficient to maintain levels of thermal decomposition products below their exposure guidelines. 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.

For prolonged or repeated contact, gloves made from the following material(s) are recommended (breakthrough times are >4 hours): Butyl Rubber, Polymer laminate

Any glove recommended for prolonged/repeated contact is also suitable for short-term/splash contact.

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:
For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use a positive pressure supplied-air respirator.
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates
Half facepiece or full facepiece supplied-air respirator
Organic vapor cartridges 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

Physical state	Liquid
Specific Physical Form:	Aerosol
Color	Amber
Odor	Mild Solvent
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	60 ºC [*Details:*Approximately]
Flash Point	-101.1 ºC [*Details:*Approximately]
Evaporation rate	1
Flammability	Flammable Aerosol: Category 1.
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	<= 4137 mmHg
Relative Vapor Density	2
Density	0.863 g/ml
Relative Density	0.86 [*Ref Std:*WATER=1]
Water solubility	Nil
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Kinematic Viscosity	116 mm2/sec
Volatile Organic Compounds	24.5 % weight [*Test Method:*calculated per CARB title 2]
Percent volatile	76.6 % weight [*Test Method:*Estimated]

VOC Less H2O & Exempt Solvents	424 g/l [*Test Method:*calculated SCAQMD rule 443.1]

Particle Characteristics	*Not Applicable*

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

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

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:
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:
Prolonged or repeated exposure may cause: Dermal Defatting: Signs/symptoms may include localized redness, itching,

drying and cracking of skin.

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy 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.

Single exposure, above recommended guidelines, may cause: Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

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-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 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
Non-Hazardous Components (NJTS Reg. No. 04499600-7411)	Dermal	Not available	LD50 > 2,000 mg/kg
Non-Hazardous Components (NJTS Reg. No. 04499600-7411)	Ingestion	Not available	LD50 > 2,000 mg/kg
Dimethyl Ether	Inhalation-Gas (4 hours)	Rat	LC50 164,000 ppm
Hexamethyldisiloxane	Dermal	Rabbit	LD50 12,160 mg/kg
Hexamethyldisiloxane	Inhalation-Vapor (4 hours)	Rat	LC50 106 mg/l
Hexamethyldisiloxane	Ingestion	Rat	LD50 > 12,200 mg/kg
1,1-Difluoroethane	Inhalation-Gas (4 hours)	Rat	LC50 > 437,000 ppm
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
N-Butyl Acetate	Dermal	Rabbit	LD50 > 14,112 mg/kg

N-Butyl Acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 1.8 mg/l
N-Butyl Acetate	Inhalation-Vapor (4 hours)	Rat	LC50 > 21 mg/l
N-Butyl Acetate	Ingestion	Rat	LD50 > 10,760 mg/kg
Morpholine	Dermal	Rabbit	LD50 500 mg/kg
Morpholine	Inhalation-Vapor	Rat	LC50 estimated to be 10 - 20 mg/l
Morpholine	Ingestion	Rat	LD50 1,680 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Methyl Acetate	Rabbit	No significant irritation
Propane	Rabbit	Minimal irritation
Non-Hazardous Components (NJTS Reg. No. 04499600-7411)	Professional judgement	No significant irritation
Hexamethyldisiloxane	Rabbit	No significant irritation
Cyclohexane	Rabbit	Mild irritant
N-Butyl Acetate	Rabbit	No significant irritation
Morpholine	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Methyl Acetate	Rabbit	Moderate irritant
Propane	Rabbit	Mild irritant
Non-Hazardous Components (NJTS Reg. No. 04499600-7411)	Professional judgement	No significant irritation
Hexamethyldisiloxane	Rabbit	Mild irritant
Cyclohexane	Rabbit	Mild irritant
N-Butyl Acetate	Human	Mild irritant
Morpholine	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
Methyl Acetate	Human	Not classified
Non-Hazardous Components (NJTS Reg. No. 04499600-7411)		Not classified
Hexamethyldisiloxane	Human	Not classified
N-Butyl Acetate	Multiple animal species	Not classified
Morpholine	Guinea pig	Not classified

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 Acetate	In Vitro	Not mutagenic
Methyl Acetate	In vivo	Not mutagenic
Propane	In Vitro	Not mutagenic
Dimethyl Ether	In Vitro	Not mutagenic

Dimethyl Ether	In vivo	Not mutagenic
Hexamethyldisiloxane	In Vitro	Not mutagenic
Hexamethyldisiloxane	In vivo	Not mutagenic
1,1-Difluoroethane	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,1-Difluoroethane	In vivo	Some positive data exist, but the data are not sufficient for classification
Cyclohexane	In Vitro	Not mutagenic
Cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification
N-Butyl Acetate	In Vitro	Not mutagenic
Morpholine	In Vitro	Some positive data exist, but the data are not sufficient for classification
Morpholine	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Dimethyl Ether	Inhalation	Rat	Not carcinogenic
Hexamethyldisiloxane	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
1,1-Difluoroethane	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Morpholine	Ingestion	Multiple animal species	Not carcinogenic
Morpholine	Inhalation	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Dimethyl Ether	Inhalation	Not classified for development	Rat	NOAEL 40,000 ppm	during organogenesis
Hexamethyldisiloxane	Inhalation	Not classified for female reproduction	Rabbit	NOAEL 33 mg/l	2 generation
Hexamethyldisiloxane	Inhalation	Not classified for male reproduction	Rabbit	NOAEL 33 mg/l	2 generation
Hexamethyldisiloxane	Inhalation	Not classified for development	Multiple animal species	NOAEL 19.9 mg/l	during gestation
1,1-Difluoroethane	Inhalation	Not classified for development	Rat	NOAEL 50,000 ppm	during organogenesis
Cyclohexane	Inhalation	Not classified for female reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Not classified for male reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Not classified for development	Rat	NOAEL 6.9 mg/l	2 generation
N-Butyl Acetate	Inhalation	Not classified for female reproduction	Rat	NOAEL 9.5 mg/l	2 generation
N-Butyl Acetate	Inhalation	Not classified for male reproduction	Rat	NOAEL 9.5 mg/l	2 generation
N-Butyl Acetate	Inhalation	Not classified for development	Rat	NOAEL 3.6 mg/l	2 generation
Morpholine	Ingestion	Toxic to male reproduction	similar compounds	NOAEL 60 mg/kg/day	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
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 animal	NOAEL Not available	
Methyl Acetate	Inhalation	blindness	Not classified		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	Not classified	Human	NOAEL Not available	
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
1,1-Difluoroethane	Inhalation	cardiac sensitization	Causes damage to organs	Human and animal	NOAEL Not available	poisoning and/or abuse
1,1-Difluoroethane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL 100,000 ppm	
1,1-Difluoroethane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	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	
Cyclohexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
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
N-Butyl Acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Morpholine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
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	Not classified	Rat	NOAEL 6.1 mg/l	28 days
Methyl Acetate	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 6.1 mg/l	28 days
Methyl Acetate	Inhalation	liver	Not classified	Rat	NOAEL 6.1	28 days

					mg/l	
Methyl Acetate	Inhalation	immune system	Not classified	Rat	NOAEL 6.1 mg/l	28 days
Methyl Acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 6.1 mg/l	28 days
Dimethyl Ether	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 25,000 ppm	2 years
Dimethyl Ether	Inhalation	liver	Not classified	Rat	NOAEL 20,000 ppm	30 weeks
Hexamethyldisiloxane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
Hexamethyldisiloxane	Dermal	kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
Hexamethyldisiloxane	Dermal	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
Hexamethyldisiloxane	Dermal	hematopoietic system	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
Hexamethyldisiloxane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
Hexamethyldisiloxane	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 33 mg/l	13 weeks
Hexamethyldisiloxane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 1.3 mg/l	13 weeks
Hexamethyldisiloxane	Inhalation	heart	Not classified	Rat	NOAEL 33 mg/l	13 weeks
Hexamethyldisiloxane	Inhalation	endocrine system	Not classified	Rat	NOAEL 33 mg/l	13 weeks
Hexamethyldisiloxane	Inhalation	liver	Not classified	Rat	NOAEL 33 mg/l	13 weeks
Hexamethyldisiloxane	Inhalation	immune system	Not classified	Rat	NOAEL 33 mg/l	13 weeks
Hexamethyldisiloxane	Inhalation	nervous system	Not classified	Rat	NOAEL 33 mg/l	13 weeks
Hexamethyldisiloxane	Inhalation	eyes	Not classified	Rat	NOAEL 33 mg/l	13 weeks
Hexamethyldisiloxane	Inhalation	respiratory system	Not classified	Rat	NOAEL 33 mg/l	13 weeks
Hexamethyldisiloxane	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 640 mg/kg/day	4 weeks
Hexamethyldisiloxane	Ingestion	liver	Not classified	Rat	NOAEL 640 mg/kg/day	4 weeks
Hexamethyldisiloxane	Ingestion	immune system	Not classified	Rat	NOAEL 640 mg/kg/day	4 weeks
Hexamethyldisiloxane	Ingestion	nervous system	Not classified	Rat	NOAEL 640 mg/kg/day	4 weeks
Hexamethyldisiloxane	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 640 mg/kg/day	4 weeks
1,1-Difluoroethane	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 25,000 ppm	2 years
1,1-Difluoroethane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 25,000 ppm	2 years
1,1-Difluoroethane	Inhalation	respiratory system	Not classified	Rat	NOAEL 25,000 ppm	2 years
Cyclohexane	Inhalation	liver	Not classified	Rat	NOAEL 24 mg/l	90 days
Cyclohexane	Inhalation	auditory system	Not classified	Rat	NOAEL 1.7 mg/l	90 days
Cyclohexane	Inhalation	kidney and/or bladder	Not classified	Rabbit	NOAEL 2.7 mg/l	10 weeks
Cyclohexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 24 mg/l	14 weeks
Cyclohexane	Inhalation	peripheral nervous	Not classified	Rat	NOAEL 8.6	30 weeks

		system			mg/l	
N-Butyl Acetate	Inhalation	endocrine system	Not classified	Rat	NOAEL 9.6 mg/l	13 weeks
N-Butyl Acetate	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 9.6 mg/l	13 weeks
N-Butyl Acetate	Inhalation	liver	Not classified	Rat	NOAEL 9.6 mg/l	13 weeks
N-Butyl Acetate	Inhalation	nervous system	Not classified	Rat	NOAEL 9.6 mg/l	13 weeks
N-Butyl Acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 9.6 mg/l	13 weeks
N-Butyl Acetate	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 4.8 mg/l	13 weeks
N-Butyl Acetate	Inhalation	respiratory system	Not classified	Rat	NOAEL 4.8 mg/l	13 weeks
N-Butyl Acetate	Inhalation	heart	Not classified	Rat	NOAEL 9.6 mg/l	13 weeks
N-Butyl Acetate	Inhalation	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 9.6 mg/l	13 weeks
N-Butyl Acetate	Inhalation	immune system	Not classified	Rat	NOAEL 9.6 mg/l	13 weeks
N-Butyl Acetate	Inhalation	eyes	Not classified	Rat	NOAEL 9.6 mg/l	13 weeks
N-Butyl Acetate	Inhalation	vascular system	Not classified	Rat	NOAEL 9.6 mg/l	13 weeks
Morpholine	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Guinea pig	LOAEL 900 mg/kg/day	13 days
Morpholine	Dermal	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Guinea pig	LOAEL 900 mg/kg/day	13 days
Morpholine	Dermal	hematopoietic system	Not classified	Guinea pig	NOAEL 900 mg/kg/day	13 days
Morpholine	Inhalation	eyes	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Morpholine	Inhalation	pulmonary fibrosis	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.09 mg/l	13 weeks
Morpholine	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 64 mg/l	5 days
Morpholine	Inhalation	liver	Not classified	Rat	LOAEL 64 mg/l	5 days
Morpholine	Inhalation	heart	Not classified	Rat	NOAEL 0.9 mg/l	13 weeks
Morpholine	Inhalation	endocrine system	Not classified	Rat	NOAEL 0.9 mg/l	13 weeks
Morpholine	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 0.53 mg/l	104 weeks
Morpholine	Inhalation	nervous system	Not classified	Rat	NOAEL 0.53 mg/l	104 weeks
Morpholine	Ingestion	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 160 mg/kg/day	30 days
Morpholine	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 160 mg/kg/day	30 days
Morpholine	Ingestion	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 160 mg/kg/day	30 days
Morpholine	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 800 mg/kg/day	30 days
Morpholine	Ingestion	endocrine system	Not classified	Rat	NOAEL 323 mg/kg/day	4 weeks

Aspiration Hazard

Name	Value
Cyclohexane	Aspiration hazard

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

SECTION 12: Ecological information

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Facility must be capable of handling aerosol cans. Combustion products will include HF. Facility must be capable of handling halogenated materials. 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.

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.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Flammable (gases, aerosols, liquids, or solids)

Health Hazards
Reproductive toxicity
Serious eye damage or eye irritation
Simple Asphyxiant
Specific target organ toxicity (single or repeated exposure)

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

Ingredient	C.A.S. No	% by Wt

Cyclohexane	110-82-7	Trade Secret	1 - 5

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

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: 3 **Flammability:** 3 **Instability:** 0 **Special Hazards:** None
Aerosol Storage Code: 3

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.

The NFPA Health code of 3 is due to emergency situations where the material may thermally decompose and release Hydrogen Fluoride. During normal use conditions, please reference Section 2 and Section 11 of the SDS for additional health hazard information.

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