



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M™ Novec™ Flux Remover

Product Identification Numbers

98-0212-4891-3, 98-0212-4892-1
7100067836, 7010352611

1.2. Recommended use and restrictions on use

Recommended use

Flux Remover

Restrictions on use

For Industrial Use only. Not intended for consumer sale or use. Not intended for use as a medical device or drug.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Electronics Materials Solutions 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

Gas Under Pressure: Liquefied gas.
Serious Eye Damage/Irritation: Category 2A.
Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements

Signal word

Warning

Symbols

Gas cylinder | Exclamation mark |

Pictograms**Hazard Statements**

Contains gas under pressure; may explode if heated.

Causes serious eye irritation.

May cause drowsiness or dizziness.

Precautionary Statements**Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear eye/face protection.

Wash thoroughly after handling.

Response:

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

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

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

Protect from sunlight. Store in a well-ventilated place.

Keep container tightly closed.

Disposal:

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

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
1,2-Trans-dichloroethylene	156-60-5	55 - 70
METHYL NONAFLUOROISOBUTYL ETHER	163702-08-7	15 - 30
METHYL NONAFLUROBUTYL ETHER	163702-07-6	10 - 20
Carbon dioxide	124-38-9	1 - 5
Isopropyl Alcohol	67-63-0	<= 3
1,2-Butylene Oxide	106-88-7	< 1
4-Methoxyphenol	150-76-5	< 1

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:

Wash with soap and water. If you feel unwell, 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

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.

5.3. Special protective actions for fire-fighters

When fire fighting conditions are severe and total thermal decomposition of the product is possible, 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. 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.

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. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed 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. Avoid skin contact with hot material. Store work clothes separately from other clothing, food and tobacco products. Do not pierce or burn, even after use. Avoid breathing 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.) No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products.

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 strong bases. 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
1,2-Butylene Oxide	106-88-7	AIHA	TWA:5.9 mg/m3(2 ppm)	
Carbon dioxide	124-38-9	ACGIH	TWA:5000 ppm;STEL:30000 ppm	
Carbon dioxide	124-38-9	OSHA	TWA:9000 mg/m3(5000 ppm)	
4-Methoxyphenol	150-76-5	ACGIH	TWA:5 mg/m3	
1,2-Trans-dichloroethylene	156-60-5	ACGIH	TWA:200 ppm	
Ethene, 1,2-dichloro-	156-60-5	OSHA	TWA:790 mg/m3(200 ppm)	
METHYL NONAFLUOROBUTYL ETHER	163702-07- 6	AIHA	TWA:750 ppm	
METHYL NONAFLUOROISOBUTYL ETHER	163702-08- 7	AIHA	TWA:750 ppm	
Isopropyl Alcohol	67-63-0	ACGIH	TWA:200 ppm;STEL:400 ppm	A4: Not class. as human carcin
Isopropyl Alcohol	67-63-0	OSHA	TWA:980 mg/m3(400 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 appropriate local exhaust when product is heated. 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:

Full Face Shield

Indirect Vented Goggles

Skin/hand protection

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

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

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

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:

During heating:

Use a positive pressure supplied-air respirator if there is a potential for over exposure from an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

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

Organic vapor respirators may have short service life.

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

Thermal hazards

Wear heat insulating gloves when handling hot material to prevent thermal burns.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state

Liquid

Color

Colorless

Specific Physical Form:

Aerosol

Odor

Slight Odor

Odor threshold

No Data Available

pH

Not Applicable

Melting point

Not Applicable

Boiling Point

42.5 °C

Flash Point

No flash point

Evaporation rate

No Data Available

Flammability (solid, gas)

Not Applicable

Flammable Limits(LEL)

5.9 % volume

Flammable Limits(UEL)

14.5 % volume

Vapor Pressure

310.7 mmHg

Vapor Density

2.3 [Ref Std: AIR=1]

Density

1.3 g/ml

Specific Gravity

1.3 [Ref Std: WATER=1]

Solubility In Water

28 ppm

Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	408 °C
Decomposition temperature	<i>No Data Available</i>
Viscosity	0.0004 Pa-s
Molecular weight	<i>Not Applicable</i>
Percent volatile	<i>No Data Available</i>

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 bases

Strong oxidizing agents

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Hydrogen Chloride	At Elevated Temperatures
Hydrogen Fluoride	At Elevated Temperatures
Perfluoroisobutylene (PFIB)	At Elevated Temperatures

If the product is exposed to extreme condition of heat from misuse or equipment failure, toxic decomposition products that include hydrogen fluoride and perfluoroisobutylene can occur.

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 additional health effects (see below).

Skin Contact:

Contact with the skin during product use is not expected to result in significant irritation.

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.

Carcinogenicity:

Ingredient	CAS No.	Class Description	Regulation
1,2-Butylene Oxide	106-88-7	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
1,2-Trans-dichloroethylene	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,2-Trans-dichloroethylene	Inhalation-Vapor (4 hours)	Rat	LC50 95.6 mg/l
1,2-Trans-dichloroethylene	Ingestion	Rat	LD50 7,902 mg/kg
METHYL NONAFLUOROISOBUTYL ETHER	Dermal		LD50 estimated to be > 5,000 mg/kg
METHYL NONAFLUOROISOBUTYL ETHER	Inhalation-Vapor (4 hours)	Rat	LC50 > 1,000 mg/l
METHYL NONAFLUOROISOBUTYL ETHER	Ingestion	Rat	LD50 > 5,000 mg/kg
METHYL NONAFLUOROBUTYL ETHER	Dermal		LD50 estimated to be > 5,000 mg/kg
METHYL NONAFLUOROBUTYL ETHER	Inhalation-Vapor (4 hours)	Rat	LC50 > 1,000 mg/l
METHYL NONAFLUOROBUTYL ETHER	Ingestion	Rat	LD50 > 5,000 mg/kg
Carbon dioxide	Inhalation-Gas (4 hours)	Rat	LC50 > 53,000 ppm
Isopropyl Alcohol	Dermal	Rabbit	LD50 12,870 mg/kg
Isopropyl Alcohol	Inhalation-Vapor (4 hours)	Rat	LC50 72.6 mg/l
Isopropyl Alcohol	Ingestion	Rat	LD50 4,710 mg/kg
4-Methoxyphenol	Dermal	Rat	LD50 > 2,000 mg/kg
4-Methoxyphenol	Ingestion	Rat	LD50 1,630 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
1,2-Trans-dichloroethylene	Rabbit	Minimal irritation
METHYL NONAFLUOROISOBUTYL ETHER	Rabbit	No significant irritation
METHYL NONAFLUROBUTYL ETHER	Rabbit	No significant irritation
Isopropyl Alcohol	Multiple animal species	No significant irritation
4-Methoxyphenol	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
1,2-Trans-dichloroethylene	Rabbit	Moderate irritant
METHYL NONAFLUOROISOBUTYL ETHER	Rabbit	No significant irritation
METHYL NONAFLUROBUTYL ETHER	Rabbit	No significant irritation
Isopropyl Alcohol	Rabbit	Severe irritant
4-Methoxyphenol	Rabbit	Severe irritant

Skin Sensitization

Name	Species	Value
METHYL NONAFLUOROISOBUTYL ETHER	Guinea pig	Not classified
METHYL NONAFLUROBUTYL ETHER	Guinea pig	Not classified
Isopropyl Alcohol	Guinea pig	Not classified
4-Methoxyphenol	Guinea pig	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
1,2-Trans-dichloroethylene	In Vitro	Not mutagenic
1,2-Trans-dichloroethylene	In vivo	Not mutagenic
METHYL NONAFLUOROISOBUTYL ETHER	In Vitro	Not mutagenic
METHYL NONAFLUROISOBUTYL ETHER	In vivo	Not mutagenic
METHYL NONAFLUROBUTYL ETHER	In Vitro	Not mutagenic
METHYL NONAFLUROBUTYL ETHER	In vivo	Not mutagenic
Isopropyl Alcohol	In Vitro	Not mutagenic
Isopropyl Alcohol	In vivo	Not mutagenic
4-Methoxyphenol	In vivo	Not mutagenic
4-Methoxyphenol	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Isopropyl Alcohol	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
4-Methoxyphenol	Dermal	Multiple animal species	Not carcinogenic
4-Methoxyphenol	Ingestion	Multiple animal species	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
1,2-Trans-dichloroethylene	Inhalation	Not classified for development	Rat	NOAEL 24 mg/l	during organogenesis
METHYL NONAFLUOROISOBUTYL ETHER	Inhalation	Not classified for female reproduction	Rat	NOAEL 129 mg/l	1 generation
METHYL NONAFLUOROISOBUTYL ETHER	Inhalation	Not classified for male reproduction	Rat	NOAEL 129 mg/l	1 generation
METHYL NONAFLUOROISOBUTYL ETHER	Inhalation	Not classified for development	Rat	NOAEL 307 mg/l	during gestation
METHYL NONAFLUROBUTYL ETHER	Inhalation	Not classified for female reproduction	Rat	NOAEL 129 mg/l	1 generation
METHYL NONAFLUROBUTYL ETHER	Inhalation	Not classified for male reproduction	Rat	NOAEL 129 mg/l	1 generation
METHYL NONAFLUROBUTYL ETHER	Inhalation	Not classified for development	Rat	NOAEL 307 mg/l	during gestation
Carbon dioxide	Inhalation	Not classified for male reproduction	Mouse	LOAEL 350,000 ppm	not available
Carbon dioxide	Inhalation	Not classified for development	Rat	LOAEL 60,000 ppm	24 hours
Isopropyl Alcohol	Ingestion	Not classified for development	Rat	NOAEL 400 mg/kg/day	during organogenesis
Isopropyl Alcohol	Inhalation	Not classified for development	Rat	LOAEL 9 mg/l	during gestation
4-Methoxyphenol	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	prematuring into lactation
4-Methoxyphenol	Ingestion	Not classified for male reproduction	Rat	NOAEL 300 mg/kg/day	28 days
4-Methoxyphenol	Ingestion	Not classified for development	Rat	NOAEL 200 mg/kg/day	during gestation

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

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
1,2-Trans-dichloroethylene	Inhalation	central nervous system depression	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
1,2-Trans-dichloroethylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
1,2-Trans-dichloroethylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 4,500 mg/kg	not applicable
METHYL NONAFLUROISOBUTYL ETHER	Inhalation	nervous system	Not classified	Dog	LOAEL 913 mg/l	10 minutes
METHYL NONAFLUROISOBUTYL ETHER	Inhalation	cardiac sensitization	Not classified	Dog	NOAEL 913 mg/l	10 minutes
METHYL NONAFLUROBUTYL ETHER	Inhalation	nervous system	Not classified	Dog	LOAEL 913 mg/l	10 minutes
METHYL NONAFLUROBUTYL ETHER	Inhalation	cardiac sensitization	Not classified	Dog	NOAEL 913 mg/l	10 minutes
Isopropyl Alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Isopropyl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Isopropyl Alcohol	Inhalation	auditory system	Not classified	Guinea	NOAEL 13.4	24 hours

Isopropyl Alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
4-Methoxyphenol	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
1,2-Trans-dichloroethylene	Inhalation	endocrine system liver kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 16 mg/l	90 days
1,2-Trans-dichloroethylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 2,000 mg/kg/day	14 weeks
1,2-Trans-dichloroethylene	Ingestion	blood liver	Not classified	Rat	NOAEL 125 mg/kg/day	14 weeks
1,2-Trans-dichloroethylene	Ingestion	heart immune system respiratory system	Not classified	Rat	NOAEL 2,000 mg/kg/day	14 weeks
METHYL NONAFLUOROISOBUTYL ETHER	Inhalation	liver	Not classified	Rat	NOAEL 155 mg/l	13 weeks
METHYL NONAFLUOROISOBUTYL ETHER	Inhalation	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 129 mg/l	11 weeks
METHYL NONAFLUOROISOBUTYL ETHER	Inhalation	heart skin endocrine system gastrointestinal tract hematopoietic system immune system muscles nervous system eyes kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 155 mg/l	13 weeks
METHYL NONAFLUOROISOBUTYL ETHER	Ingestion	endocrine system liver heart hematopoietic system immune system nervous system eyes kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
METHYL NONAFLUOROBUTYL ETHER	Inhalation	liver	Not classified	Rat	NOAEL 155 mg/l	13 weeks
METHYL NONAFLUOROBUTYL ETHER	Inhalation	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 129 mg/l	11 weeks
METHYL NONAFLUOROBUTYL ETHER	Inhalation	heart skin endocrine system gastrointestinal tract hematopoietic system immune system muscles nervous system eyes kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 155 mg/l	13 weeks
METHYL NONAFLUOROBUTYL ETHER	Ingestion	endocrine system liver heart hematopoietic system immune system nervous	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

		system eyes kidney and/or bladder respiratory system				
Carbon dioxide	Inhalation	heart bone, teeth, nails, and/or hair liver nervous system kidney and/or bladder respiratory system	Not classified	Rat	LOAEL 60,000 ppm	166 days
Isopropyl Alcohol	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 12.3 mg/l	24 months
Isopropyl Alcohol	Inhalation	nervous system	Not classified	Rat	NOAEL 12 mg/l	13 weeks
Isopropyl Alcohol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 400 mg/kg/day	12 weeks
4-Methoxyphenol	Ingestion	gastrointestinal tract	Not classified	Rat	LOAEL 300 mg/kg/day	28 days
4-Methoxyphenol	Ingestion	liver immune system	Not classified	Rat	NOAEL 300 mg/kg/day	28 days
4-Methoxyphenol	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 300 mg/kg/day	28 days
4-Methoxyphenol	Ingestion	heart endocrine system hematopoietic system nervous system respiratory system	Not classified	Rat	NOAEL 300 mg/kg/day	28 days

Aspiration Hazard

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

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

SECTION 12: Ecological information**Ecotoxicological information**

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

Chemical fate information

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

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

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Facility must be capable of handling aerosol cans. Combustion products will include halogen acid (HCl/HF/HBr). 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.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information**15.1. US Federal Regulations**

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:**Physical Hazards**

Gas under pressure

Health Hazards

Serious eye damage or eye irritation

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):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
1,2-Trans-dichloroethylene (Ethene, 1,2-dichloro-)	156-60-5	55 - 70

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: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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

HMIS Hazard Classification**Health: 2 Flammability: 1 Physical Hazard: 0 Personal Protection: X** - See PPE section.

Hazardous Material Identification System (HMIS® IV) 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® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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