Safety Data Sheet

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Document Group:	31-5229-5	**Version Number:**	2.05
Issue Date:	03/17/20	**Supercedes Date:**	07/26/18

Product identifier
3M(TM) Fire Barrier Rated Foam, FIP 1-Step KIT

ID Number	UPC	ID Number	UPC
70-0067-7078-1		98-0400-5645-3	

7100020738

Recommended use
Passive Fire Protection

Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes 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:

31-5236-0, 31-5458-0

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Document Group:	31-5236-0	**Version Number:**	5.00
Issue Date:	01/12/26	**Supersedes Date:**	05/01/24

SECTION 1: Identification

1.1. Product identifier
3M(TM) Fire Barrier Rated Foam, FIP 1-Step Part B

1.2. Recommended use and restrictions on use

Recommended use
Passive Fire Protection

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Specialties 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
Skin Corrosion/Irritation: Category 2.
Serious Eye Damage/Irritation: Category 2A.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1A.
Specific Target Organ Toxicity (repeated exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements
Signal word
Danger

Symbols
Exclamation mark |Health Hazard |

Pictograms



Hazard Statements

Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.

Causes damage to organs through prolonged or repeated exposure: respiratory system.

Precautionary statements

Prevention:
Do not breathe vapors, dust, or 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.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves and eye protection.
In case of inadequate ventilation wear respiratory protection.

Response:
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
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.
Get medical attention if you feel unwell.
If eye irritation persists or if skin irritation or rash occurs: Get medical attention.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
Take off contaminated clothing and wash it before reuse.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

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

Supplemental Information:
Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	9016-87-9	80 - 100 Trade Secret *

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

secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. 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

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Allergic skin reaction (redness, swelling, blistering, and itching). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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 ordinary combustible material such as water or foam 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

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters
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
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. Evacuate area. 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.

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. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. 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 container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. 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. 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
For industrial/occupational use only. Not for consumer sale or use. Do not use in a confined area with minimal air exchange. 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.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed to prevent loss of stabilizing materials. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from strong bases. Store away from amines.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

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. 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:
Safety Glasses with side shields
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.

For prolonged or repeated contact, gloves made from the following material(s) are recommended (breakthrough times are >4 hours): Butyl Rubber, Natural Rubber, Neoprene, Nitrile Rubber, Polyvinyl Chloride

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

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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 and particulates

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
Color	Brown
Odor	Light Earthy
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*Not Applicable*
Boiling point/Initial boiling point/Boiling range	330 ºC
Flash Point	>=220 ºC [*Test Method:*Closed Cup]
Evaporation rate	*No Data Available*
Flammability	Not Applicable
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	*No Data Available*
Relative Vapor Density	8.5 [@ 20 ºC]
Density	1.22 g/ml
Relative Density	1.22 [*Ref Std:*WATER=1]
Water solubility	Negligible
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	492 mm2/sec
Volatile Organic Compounds	< 1

Percent volatile	*No Data Available*
VOC Less H2O & Exempt Solvents	< 1
Molecular weight	*No Data Available*

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 may occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Alcohols
Amines
Strong acids
Strong bases
Water

10.6. Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

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

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

May cause additional health effects (see below).

Skin Contact:
Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.
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.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

Additional Information:
Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

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
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Dermal	Rabbit	LD50 > 5,000 mg/kg
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Ingestion	Rat	LD50 31,600 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	official classification	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	official classification	Severe irritant

Skin Sensitization

Name	Species	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Mouse	Sensitizing

Respiratory Sensitization

Name	Species	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Human	Sensitizing

Germ Cell Mutagenicity

Name	Route	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks

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. 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
Not Applicable.

Health Hazards
Respiratory or Skin Sensitization
Serious eye damage or eye irritation
Skin Corrosion or 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):

Ingredient	C.A.S. No	% by Wt
POLYMETHYLENE POLYPHENYLENE ISOCYANATE	9016-87-9	Trade Secret 80 - 100

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: 2 **Flammability:** 1 **Instability:** 1 **Special Hazards:** None

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

Document Group:	31-5236-0	**Version Number:**	5.00
Issue Date:	01/12/26	**Supersedes Date:**	05/01/24

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3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

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Document Group:	31-5458-0	**Version Number:**	2.05
Issue Date:	07/10/26	**Supersedes Date:**	07/28/22

SECTION 1: Identification

1.1. Product identifier
3M™ Fire Barrier Rated Foam, FIP 1-Step Part A

1.2. Recommended use and restrictions on use

Recommended use
Passive Fire Protection

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes 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
Acute Toxicity (oral): Category 4.
Serious Eye Damage/Irritation: Category 2B.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |

Pictograms



Hazard Statements

Harmful if swallowed.
Causes eye irritation.

Precautionary statements

Prevention:
Wash exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.

Response:
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse mouth.
If eye irritation persists: Get medical advice.

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

50% of the mixture consists of ingredients of unknown acute oral toxicity.
50% of the mixture consists of ingredients of unknown acute dermal toxicity.
50% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Polymer NJTSRN 04499600-6935	Trade Secret*	25 - 60
NH4 Polyphosphate	68333-79-9	10 - 30 Trade Secret *
Non-Halogen Flame Retardant NJTSRN 04499600-6939	Trade Secret*	10 - 30
Smoke Suppressant NJTSRN 04499600-6941	Trade Secret*	1 - 10
Wax NJTSRN 04499600-6936	Trade Secret*	1 - 10
Water	7732-18-5	< 5
Catalyst NJTSRN 04499600-6940	Trade Secret*	< 5
Siloxanes NJTSRN 04499600-6937	Trade Secret*	< 5

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. If you feel unwell, 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
No critical symptoms or effects. 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
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ammonia	During Combustion

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
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. Evacuate area. 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.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
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
Avoid eye contact. For industrial/occupational use only. Not for consumer sale or use. Avoid breathing

dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents. Store away from amines.

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
Catalyst NJTSRN 04499600-6940	Trade Secret	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Smoke Suppressant NJTSRN 04499600-6941	Trade Secret	ACGIH	TWA(inhalable particulates):10 mg/m3	
Smoke Suppressant NJTSRN 04499600-6941	Trade Secret	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Smoke Suppressant NJTSRN 04499600-6941	Trade Secret	ACGIH	TWA(respirable particles):3 mg/m3	
Smoke Suppressant NJTSRN 04499600-6941	Trade Secret	OSHA	TWA(as total dust):50 millions of particles/cu. ft.(15 mg/m3);TWA(respirable fraction):15 millions of particles/cu. ft.(5 mg/m3)	

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
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:
Safety Glasses with side shields
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: Butyl Rubber, Nitrile Rubber

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 particulates

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
Color	Red-Brown
Odor	Light Earthy
Odor threshold	*No Data Available*
pH	6 - 8
Melting point	*No Data Available*
Boiling Point	*No Data Available*
Flash Point	No flash point
Evaporation rate	*No Data Available*
Flammability	Not Applicable
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	*No Data Available*
Relative Vapor Density	*No Data Available*
Density	1.3 g/l
Relative Density	1.3 [*Ref Std:*WATER=1]
Solubility in Water	Negligible
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	192,308 mm2/sec
Molecular weight	*No Data Available*
Volatile Organic Compounds	< 1
VOC Less H2O & Exempt Solvents	< 10 g/l
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
Alcohols
Amines
Strong acids
Strong bases
Strong oxidizing agents
Water

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

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

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

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

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

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg

Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
NH4 Polyphosphate	Dermal	Rat	LD50 > 5,000 mg/kg
NH4 Polyphosphate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.85 mg/l
NH4 Polyphosphate	Ingestion	Rat	LD50 > 300, < 2,000 mg/kg
Non-Halogen Flame Retardant NJTSRN 04499600-6939	Dermal	Rat	LD50 > 2,000 mg/kg
Non-Halogen Flame Retardant NJTSRN 04499600-6939	Ingestion	Rat	LD50 > 2,000 mg/kg
Smoke Suppressant NJTSRN 04499600-6941	Dermal		LD50 estimated to be > 5,000 mg/kg
Smoke Suppressant NJTSRN 04499600-6941	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Smoke Suppressant NJTSRN 04499600-6941	Ingestion	Rat	LD50 > 5,000 mg/kg
Wax NJTSRN 04499600-6936	Dermal	Rat	LD50 > 2,000 mg/kg
Wax NJTSRN 04499600-6936	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.1 mg/l
Wax NJTSRN 04499600-6936	Ingestion	Rat	LD50 > 2,000 mg/kg
Catalyst NJTSRN 04499600-6940	Dermal	Rabbit	LD50 > 2,000 mg/kg
Catalyst NJTSRN 04499600-6940	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.57 mg/l
Catalyst NJTSRN 04499600-6940	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
NH4 Polyphosphate	In vitro data	No significant irritation
Non-Halogen Flame Retardant NJTSRN 04499600-6939	Rat	Minimal irritation
Smoke Suppressant NJTSRN 04499600-6941	Rabbit	No significant irritation
Wax NJTSRN 04499600-6936	Rabbit	No significant irritation
Catalyst NJTSRN 04499600-6940	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
NH4 Polyphosphate	Rabbit	Moderate irritant
Non-Halogen Flame Retardant NJTSRN 04499600-6939	Rabbit	Mild irritant
Smoke Suppressant NJTSRN 04499600-6941	Rabbit	No significant irritation
Wax NJTSRN 04499600-6936	Rabbit	Mild irritant
Catalyst NJTSRN 04499600-6940	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
NH4 Polyphosphate	similar compounds	Not classified
Smoke Suppressant NJTSRN 04499600-6941	Guinea pig	Not classified
Wax NJTSRN 04499600-6936	Mouse	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

Non-Halogen Flame Retardant NJTSRN 04499600-6939	In Vitro	Not mutagenic
Wax NJTSRN 04499600-6936	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Smoke Suppressant NJTSRN 04499600-6941	Not Specified	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Smoke Suppressant NJTSRN 04499600-6941	Ingestion	Not classified for development	Rat	NOAEL 768 mg/kg/day	during organogenesis
Wax NJTSRN 04499600-6936	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Wax NJTSRN 04499600-6936	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	5 weeks
Wax NJTSRN 04499600-6936	Ingestion	Not classified for development	Multiple animal species	NOAEL 1,000 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
NH4 Polyphosphate	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
Non-Halogen Flame Retardant NJTSRN 04499600-6939	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
Non-Halogen Flame Retardant NJTSRN 04499600-6939	Ingestion	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
Non-Halogen Flame Retardant NJTSRN 04499600-6939	Ingestion	eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
Wax NJTSRN 04499600-6936	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.004 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	heart	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	skin	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	endocrine system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	bone, teeth, nails, and/or hair	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	liver	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-	Inhalation	immune system	Not classified	Rat	NOAEL 0.03	13 weeks

6936					mg/l	
Wax NJTSRN 04499600-6936	Inhalation	muscles	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	nervous system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	eyes	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks
Wax NJTSRN 04499600-6936	Inhalation	vascular system	Not classified	Rat	NOAEL 0.03 mg/l	13 weeks

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. 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
Not Applicable.

Health Hazards
Acute toxicity
Serious eye damage or eye irritation

15.2. State Regulations
Contact 3M for more information.

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

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: 1 **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.

Document Group:	31-5458-0	**Version Number:**	2.05
Issue Date:	07/10/26	**Supersedes Date:**	07/28/22

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