# Safety Data Sheet



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|---|---|---|---|
| **Document Group:** | 39-5147-2 | **Version Number:** | 4.00 |
| **Issue Date:** | 12/09/25 | **Supersedes Date:** | 01/29/25 |

## SECTION 1: Identification

**1.1. Product identifier**
3M™ Dyneon™ Fluoroelastomer BRE 7231X

**Product Identification Numbers**
98-0213-0287-6, 98-0213-0288-4
7100152862, 7100106576

**1.2. Recommended use and restrictions on use**

**Recommended use**
Fluoroelastomer

**1.3. Supplier's details**

| | |
|---|---|
| **MANUFACTURER:** | 3M |
| **DIVISION:** | Advanced Materials 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**
Serious Eye Damage/Irritation: Category 2A.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 1B.

**2.2. Label elements**
**Signal word**
Danger

**Symbols**
Exclamation mark |Health Hazard |

**Pictograms**

**Hazard Statements**

Causes serious eye irritation.
May cause an allergic skin reaction.
May damage fertility or the unborn child.

**Precautionary statements**

**Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves, eye protection, and if needed, respiratory protection (see SDS Section 8).

**Response:**
IF ON SKIN: Wash with plenty of soap and water.
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: Get medical attention.
If eye irritation persists or if skin irritation or rash occurs: Get medical attention.
Take off contaminated clothing and wash it before reuse.

**Storage:**
Store locked up.

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

**2.3. Hazards not otherwise classified**
May cause polymer fume fever.

**Supplemental Information:**
May cause thermal burns.

## SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---|---|---|
| PROPENE-TETRAFLUOROETHYLENE-VINYLIDENE FLUORIDE COPOLYMER | 54675-89-7 | 90 - 99 |
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | 181531-28-2 | 0.3 - 1.8 |
| BISPHENOL AF | 1478-61-1 | 0.1 - 1 Trade Secret * |
| Phosphonium, tributyl(2-methoxypropyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1- | 332350-90-0 | < 1 |

| | | |
|---|---|---|
| butanesulfonamide (1:1) | | |
| Silica | 7631-86-9 | < 1 |
| SULFOLANE | 126-33-0 | 0.1 - 1 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 flush skin with large amounts of cold water for at least 15 minutes. DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Cover affected area with a clean dressing. Get immediate medical attention.

**Eye Contact:**
Immediately flush eyes with large amounts of water for at least 15 minutes. DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Get immediate medical attention.

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

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

Allergic skin reaction (redness, swelling, blistering, and itching).

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

**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**
Evacuate area. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. 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**
Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

Refer to Section 15 for additional information

## 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 handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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. Use personal protective equipment (gloves, respirators, etc.) as required.

**7.2. Conditions for safe storage including any incompatibilities**
No special storage requirements.

Refer to Section 15 for additional information

## 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 |
|---|---|---|---|---|
| Inert or Nuisance Dust, Respirable fraction | 7631-86-9 | 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) | |
| Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles | 7631-86-9 | ACGIH | TWA(inhalable particulates):10 mg/m3 | |
| Particles (insoluble or poorly soluble) not otherwise specified, respirable particles | 7631-86-9 | ACGIH | TWA(respirable particles):3 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**

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. 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. Local exhaust required above 400 C.

**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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Butyl Rubber, Neoprene, Polymer laminate

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
Half facepiece or full facepiece supplied-air respirator

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

**Thermal hazards**
Wear heat insulating gloves, indirect vented goggles, and a full face shield when handling hot material to prevent thermal burns.

Refer to Section 15 for additional information

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Solid |
| **Specific Physical Form:** | Solid Block or Slab |
| **Color** | Straw, White |
| **Odor** | Odorless |
| **Odor threshold** | *No Data Available* |
| **pH** | *Not Applicable* |
| **Melting point/Freezing point** | *Not Applicable* |

| | |
|---|---|
| **Boiling point/Initial boiling point/Boiling range** | *Not Applicable* |
| **Flash Point** | No flash point |
| **Evaporation rate** | *No Data Available* |
| **Flammability** | Not Applicable |
| **Flammable Limits(LEL)** | *Not Applicable* |
| **Flammable Limits(UEL)** | *Not Applicable* |
| **Vapor Pressure** | *Not Applicable* |
| **Relative Vapor Density** | *Not Applicable* |
| **Density** | 1.8 g/cm3 |
| **Relative Density** | 1.8 [*Ref Std:*WATER=1] |
| **Water solubility** | Negligible |
| **Solubility- non-water** | *No Data Available* |
| **Partition coefficient: n-octanol/ water** | *No Data Available* |
| **Autoignition temperature** | *Not Applicable* |
| **Decomposition temperature** | *No Data Available* |
| **Kinematic Viscosity** | *Not Applicable* |
| **Volatile Organic Compounds** | *No Data Available* |
| **Percent volatile** | *No Data Available* |
| **VOC Less H2O & Exempt Solvents** | *No Data Available* |
| **Molecular weight** | *No Data Available* |

| | |
|---|---|
| **Particle Characteristics** | *Not Applicable* |

## SECTION 10: Stability and reactivity

**10.1. Reactivity**
This material is considered to be non reactive under normal use conditions.

**10.2. Chemical stability**
Stable.

**10.3. Possibility of hazardous reactions**
Hazardous polymerization will not occur.

**10.4. Conditions to avoid**
None known.

**10.5. Incompatible materials**
Al or Mg powder and high/shear temperature conditions

**10.6. Hazardous decomposition products**

| Substance | Condition |
|---|---|
| Carbon monoxide | At Elevated Temperatures |
| Carbon dioxide | At Elevated Temperatures |
| Hydrogen Fluoride | At Elevated Temperatures |
| Perfluoroisobutylene (PFIB) | At Elevated Temperatures |
| Oxides of Sulfur | At Elevated Temperatures |
| Toxic Vapor, Gas, Particulate | 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.

During heating:
Polymer Fume Fever: Sign/symptoms may include chest pain or tightness, shortness of breath, cough, malaise, muscle aches, increased heart rate, fever, chills, sweats, nausea and headache.

May cause additional health effects (see below).

**Skin Contact:**
During heating: Thermal Burns: Signs/symptoms may include intense pain, redness and swelling, and tissue destruction. Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**
During heating: Thermal Burns: Signs/symptoms may include severe pain, redness and swelling, and tissue destruction. 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:**

**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 | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| PROPENE-TETRAFLUOROETHYLENE-VINYLIDENE FLUORIDE COPOLYMER | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| PROPENE-TETRAFLUOROETHYLENE-VINYLIDENE FLUORIDE COPOLYMER | Ingestion | Rat | LD50 > 5,000 mg/kg |

| | | | |
|---|---|---|---|
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | Dermal | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg |
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | Ingestion | Rat | LD50 > 2,000 mg/kg |
| SULFOLANE | Dermal | Rabbit | LD50 4,897 mg/kg |
| SULFOLANE | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 12 mg/l |
| SULFOLANE | Ingestion | Rat | LD50 1,846 mg/kg |
| Phosphonium, tributyl(2-methoxypropyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1-butanesulfonamide (1:1) | Ingestion | Rat | LD50 200-2000 mg/kg |
| BISPHENOL AF | Dermal | Rat | LD50 > 2,000 mg/kg |
| BISPHENOL AF | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Silica | Ingestion | Rat | LD50 > 5,110 mg/kg |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|---|---|---|
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | similar compounds | Irritant |
| SULFOLANE | Rabbit | Minimal irritation |
| Phosphonium, tributyl(2-methoxypropyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1-butanesulfonamide (1:1) | Rabbit | Minimal irritation |
| BISPHENOL AF | Rabbit | No significant irritation |
| Silica | Rabbit | No significant irritation |

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | similar compounds | Corrosive |
| SULFOLANE | Rabbit | Moderate irritant |
| Phosphonium, tributyl(2-methoxypropyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1-butanesulfonamide (1:1) | Rabbit | Severe irritant |
| BISPHENOL AF | Rabbit | Corrosive |
| Silica | Rabbit | No significant irritation |

**Skin Sensitization**

| Name | Species | Value |
|---|---|---|
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | Mouse | Sensitizing |
| SULFOLANE | Guinea pig | Not classified |
| Phosphonium, tributyl(2-methoxypropyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1-butanesulfonamide (1:1) | Guinea pig | Not classified |
| BISPHENOL AF | Guinea pig | Not classified |
| Silica | Human and animal | 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 |
|---|---|---|
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | In Vitro | Not mutagenic |
| SULFOLANE | In Vitro | Not mutagenic |
| Phosphonium, tributyl(2-methoxypropyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1-butanesulfonamide (1:1) | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| BISPHENOL AF | In vivo | Not mutagenic |
| BISPHENOL AF | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Silica | In Vitro | Not mutagenic |

**Carcinogenicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Silica | Not Specified | Mouse | 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 |
|---|---|---|---|---|---|
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | Ingestion | Toxic to female reproduction | similar compounds | LOAEL 338 ppm in the diet | 2 generation |
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | Ingestion | Toxic to male reproduction | similar compounds | LOAEL 338 ppm in the diet | 2 generation |
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | Ingestion | Toxic to development | similar compounds | LOAEL 338 ppm in the diet | 2 generation |
| SULFOLANE | Ingestion | Not classified for male reproduction | Rat | NOAEL 700 mg/kg/day | 14 days |
| SULFOLANE | Ingestion | Not classified for female reproduction | Rat | NOAEL 200 mg/kg/day | premating & during gestation |
| SULFOLANE | Ingestion | Toxic to development | Rat | NOAEL 60 mg/kg/day | premating & during gestation |
| BISPHENOL AF | Ingestion | Toxic to female reproduction | Rat | LOAEL 338 ppm in the diet | 2 generation |
| BISPHENOL AF | Ingestion | Toxic to male reproduction | Rat | LOAEL 338 ppm in the diet | 2 generation |
| BISPHENOL AF | Ingestion | Toxic to development | Rat | LOAEL 338 ppm in the diet | 2 generation |
| Silica | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Silica | Ingestion | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Silica | Ingestion | Not classified for development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL not available | |
| BISPHENOL AF | 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 |
|---|---|---|---|---|---|---|
| SULFOLANE | Inhalation | nervous system | Some positive data exist, but the data are not sufficient for classification | Multiple animal species | LOAEL 0.5 mg/l | 27 days |
| SULFOLANE | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Multiple animal species | NOAEL 0.02 mg/l | 90 days |
| SULFOLANE | Inhalation | liver | Not classified | Monkey | LOAEL 0.5 mg/l | 27 days |
| SULFOLANE | Inhalation | blood | Not classified | Guinea pig | NOAEL 0.16 mg/l | 90 days |
| SULFOLANE | Ingestion | hematopoietic system | Not classified | Rat | NOAEL 700 mg/kg/day | 28 days |
| SULFOLANE | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 60 mg/kg/day | 28 days |
| BISPHENOL AF | Ingestion | heart | Not classified | Rat | NOAEL 100 mg/kg/day | 28 days |
| BISPHENOL AF | Ingestion | endocrine system | Not classified | Rat | NOAEL 100 mg/kg/day | 28 days |
| BISPHENOL AF | Ingestion | gastrointestinal tract | Not classified | Rat | NOAEL 100 mg/kg/day | 28 days |
| BISPHENOL AF | Ingestion | hematopoietic system | Not classified | Rat | NOAEL 100 mg/kg/day | 28 days |
| BISPHENOL AF | Ingestion | liver | Not classified | Rat | NOAEL 100 mg/kg/day | 28 days |
| BISPHENOL AF | Ingestion | nervous system | Not classified | Rat | NOAEL 100 mg/kg/day | 28 days |
| BISPHENOL AF | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 100 mg/kg/day | 28 days |
| Silica | Inhalation | respiratory system | Not classified | Human | NOAEL Not available | occupational exposure |
| Silica | Inhalation | silicosis | Not classified | Human | NOAEL Not available | occupational exposure |

**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.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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.

**EPA Hazardous Waste Number (RCRA):** Not regulated

Refer to Section 15 for additional information

## 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** |
|---|
| Hazard Not Otherwise Classified (HNOC) |
| Reproductive toxicity |
| Respiratory or Skin Sensitization |
| Serious eye damage or eye irritation |

**This material contains a chemical which requires export notification under TSCA Section 12[b]:**

| Ingredient (Category if applicable) | C.A.S. No | Regulation | Status |
|---|---|---|---|
| Phosphonium, tributyl(2-methoxypropyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1-butanesulfonamide (1:1) | 332350-90-0 | Toxic Substances Control Act (TSCA) 5 SNUR or Consent Order Chemicals | Applicable |

**This material contains a chemical subject to a proposed EPA Significant New Use Rule (TSCA Section 5)**

| Ingredient (Category if applicable) | C.A.S. No | Reference |
|---|---|---|
| Phosphonium, tributyl(2-methoxypropyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1-butanesulfonamide (1:1) | 332350-90-0 | 40 CFR 721.11727 |

**Additional TSCA Information**

| Components | CAS No | Additional Information |
|---|---|---|
| PHENOL, 4,4'-[2,2,2-TRIFLUORO-1-(TRIFLUOROMETHYL)ETHYLIDENE]BIS-,ION(1), TRIBUTYL(2-METHOXYPROPYL)PHOSPHONIUM, SODIUM SALT | 181531-28-2 | Allowed use(s): Elastomer additive. Required exposure controls when handling the LVE substance: Appropriate local exhaust ventilation; unvented goggles or vented goggles as appropriate; gloves composed of butyl rubber; apron and/or coveralls as appropriate; NIOSH approved full-face air supplied respirator or half-mask air supplied respirator based on airborne concentration of contaminants and in accordance to OSHA regulations. Required environmental release controls for the LVE substance: Incineration of wastes and cleanup materials in a permitted facility or send to offsite landfill |

## 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. One or more of the components in this material is not listed on the TSCA inventory, but is approved for specific commercial use(s) under a US EPA low volume exemption.

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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|---|---|---|---|
| **Document Group:** | 39-5147-2 | **Version Number:** | 4.00 |
| **Issue Date:** | 12/09/25 | **Supersedes Date:** | 01/29/25 |

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