



## Safety Data Sheet

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<b>Document group:</b>	21-6388-9	<b>Version number:</b>	6.08
<b>Revision date:</b>	22/03/2024	<b>Supersedes date:</b>	03/10/2022

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006), as amended for GB.

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

3M™ Dyneon™ Fluoroelastomers FC 2145, FC 2210, FC 2211, FC 2230M, FC 2260, FC 2261Q, FE 5522, FE 5832X, FLS 2640Q, FLS 2650, FLS 5841, FT 2430, FT 2481, FX 11393, FX 11705, FX 11705C, LJ 211045, LJ 211009, FC 1750

#### Product Identification Numbers

97-5000-2387-0

7100044243

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### Identified uses

Fluoroelastomer

#### 1.3. Details of the supplier of the safety data sheet

**Address:** 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.  
**Telephone:** +44 (0)1344 858 000  
**E Mail:** tox.uk@mmm.com  
**Website:** www.3M.com/uk

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

##### CLASSIFICATION:

This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended for Great Britain, on classification, labelling, and packaging of substances and mixtures.

## 2.2. Label elements

The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

Not applicable

### SUPPLEMENTAL INFORMATION:

#### Supplemental Precautionary Statements:

Firefighting instructions: Does not burn without external flame. Wear self-contained breathing apparatus and protection from acidic hydrogen fluoride. Vapours liberated during processing may be hazardous if inhaled. Eye, nose, throat and lung irritation can occur from such vapours. Avoid contamination of tobacco with polymer resin. Before using, read the most current Safety Data Sheet.

## 2.3. Other hazards

May cause thermal burns.

This material does not contain any substances that are assessed to be a PBT or vPvB

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP], as amended for GB
Vinylidene fluoride-hexafluoropropylene polymer	(CAS-No.) 9011-17-0	<= 100	Substance not classified as hazardous
HFP/VDF/TFE Polymer	(CAS-No.) 25190-89-0	<= 100	Substance not classified as hazardous
Tetrafluoroethylene-propylene-vinylidene fluoride polymer	(CAS-No.) 54675-89-7	<= 100	Substance not classified as hazardous

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

## 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

Do not induce vomiting. 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. 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. Advice 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. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. 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**

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.

#### **6.4. Reference to other sections**

Refer to Section 8 and Section 13 for more information

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

Avoid inhalation of thermal decomposition products. Avoid skin contact with hot material. For industrial/occupational use only. Not for consumer sale or use. Store work clothes separately from other clothing, food and tobacco products. Do not breathe dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. 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 away from heat.

#### **7.3. Specific end use(s)**

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

### **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 Safety Data Sheet.

### Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

## 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/vapours/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:

Full face shield.

Indirect vented goggles.

#### *Applicable Norms/Standards*

Use eye/face protection conforming to EN 166

#### 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:

<b>Material</b>	<b>Thickness (mm)</b>	<b>Breakthrough Time</b>
Nitrile rubber.	No data available	No data available

#### *Applicable Norms/Standards*

Use gloves tested to EN 374

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 – Nitrile

#### 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 vapours and particulates

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

*Applicable Norms/Standards*

Use a respirator conforming to EN 140 or EN 136: filter types A & P

**Thermal hazards**

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

*Applicable Norms/Standards*

Use gloves tested to EN 407

**SECTION 9: Physical and chemical properties**

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

<b>Physical state</b>	Solid.
<b>Specific Physical Form:</b>	Solid block or slab
<b>Colour</b>	Amber
<b>Odor</b>	Odourless
<b>Odour threshold</b>	<i>No data available.</i>
<b>Melting point/freezing point</b>	<i>Not applicable.</i>
<b>Boiling point/boiling range</b>	<i>Not applicable.</i>
<b>Flammability (solid, gas)</b>	Not classified
<b>Flammable Limits(LEL)</b>	<i>Not applicable.</i>
<b>Flammable Limits(UEL)</b>	<i>Not applicable.</i>
<b>Flash point</b>	No flash point
<b>Autoignition temperature</b>	<i>Not applicable.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>pH</b>	<i>substance/mixture is non-soluble (in water)</i>
<b>Kinematic Viscosity</b>	<i>Not applicable.</i>
<b>Water solubility</b>	Negligible
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Vapour pressure</b>	<i>Not applicable.</i>
<b>Density</b>	1.8 - 1.9 g/cm <sup>3</sup>
<b>Relative density</b>	1.8 - 1.9 [Ref Std: WATER=1]
<b>Relative Vapour Density</b>	<i>Not applicable.</i>
<b>Particle Characteristics</b>	<i>Not applicable.</i>

**9.2. Other information**

**9.2.2 Other safety characteristics**

<b>Average particle size</b>	<i>No data available.</i>
<b>EU Volatile Organic Compounds</b>	<i>No data available.</i>
<b>Evaporation rate</b>	<i>No data available.</i>
<b>Molecular weight</b>	<i>No data available.</i>
<b>Percent volatile</b>	<i>Not applicable.</i>

**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 polymerisation will not occur.

## 10.4 Conditions to avoid

Not determined

## 10.5 Incompatible materials

Aluminium or magnesium powder and high/shear temperature conditions.

## 10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	At elevated temperatures.
Carbon dioxide.	At elevated temperatures.
Hydrogen Fluoride	At elevated temperatures.
Perfluoroisobutylene (PFIB).	At elevated temperatures.
Toxic vapour, gas, particulate.	At elevated temperatures.

If the product is exposed to extreme conditions 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 agree with the material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

### 11.1. Information on hazard classes as defined in the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain.

#### Signs and Symptoms of Exposure

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

##### Inhalation

Vapours from heated material may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain.

During heating:

May cause additional health effects (see below). 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.

##### Skin contact

Thermal burns: Signs/symptoms may include intense pain, redness and swelling, and tissue destruction.

##### Eye contact

Thermal burns: Signs/symptoms may include severe pain, redness and swelling, and tissue destruction. Vapours from heated material may cause eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

##### Ingestion

No known health effects.

### 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
HFP/VDF/TFE Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Tetrafluoroethylene-propylene-vinylidene fluoride polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Vinylidene fluoride-hexafluoropropylene polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
HFP/VDF/TFE Polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
Tetrafluoroethylene-propylene-vinylidene fluoride polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
Vinylidene fluoride-hexafluoropropylene polymer	Ingestion	Rat	LD50 6,000 mg/kg

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
HFP/VDF/TFE Polymer	Rabbit	No significant irritation
Vinylidene fluoride-hexafluoropropylene polymer	Rabbit	No significant irritation

#### Serious Eye Damage/Irritation

Name	Species	Value
HFP/VDF/TFE Polymer	Professional judgement	No significant irritation
Vinylidene fluoride-hexafluoropropylene polymer	Rabbit	Mild irritant

#### Skin Sensitisation

Name	Species	Value
HFP/VDF/TFE Polymer	Guinea pig	Not classified

#### Respiratory Sensitisation

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

#### Germ Cell Mutagenicity

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

#### Carcinogenicity

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

#### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

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

#### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

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

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Vinylidene fluoride-hexafluoropropylene polymer	Ingestion	liver	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 weeks

**Aspiration Hazard**

For the component/components, either no data is currently available or the data is 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.**

**11.2. Information on other hazards**

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

**SECTION 12: Ecological information**

The information below may not agree with the material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

**12.1. Toxicity**

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
HFP/VDF/TFE Polymer	25190-89-0	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Tetrafluoroethylene-propylene-vinylidene fluoride polymer	54675-89-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Vinylidene fluoride-hexafluoropropylene polymer	9011-17-0	N/A	Data not available or insufficient for classification	N/A	N/A	n/a

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
HFP/VDF/TFE Polymer	25190-89-0	Data not available or insufficient	N/A	N/A	N/A	N/A
Tetrafluoroethylene-propylene-vinylidene fluoride polymer	54675-89-7	Data not available or insufficient	N/A	N/A	N/A	N/A
Vinylidene fluoride-hexafluoropropylene polymer	9011-17-0	Data not available or insufficient	N/A	N/A	N/A	N/A

**12.3 : Bioaccumulative potential**

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
HFP/VDF/TFE Polymer	25190-89-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

Tetrafluoroethylene-propylene-vinylidene fluoride polymer	54675-89-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Vinylidene fluoride-hexafluoropropylene polymer	9011-17-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

**12.4. Mobility in soil**

No test data available.

**12.5. Results of the PBT and vPvB assessment**

This material does not contain any substances that are assessed to be a PBT or vPvB

**12.6. Other adverse effects**

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

**SECTION 13: Disposal considerations**

**13.1 Waste treatment 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. 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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

**EU waste code (product as sold)**

070213 Waste plastic

**SECTION 14: Transportation information**

Not hazardous for transportation.

	<b>Ground Transport (ADR)</b>	<b>Air Transport (IATA)</b>	<b>Marine Transport (IMDG)</b>
<b>14.1 UN number</b>	No data available.	No data available.	No data available.
<b>14.2 UN proper shipping name</b>	No data available.	No data available.	No data available.
<b>14.3 Transport hazard class(es)</b>	No data available.	No data available.	No data available.
<b>14.4 Packing group</b>	No data available.	No data available.	No data available.

<b>14.5 Environmental hazards</b>	No data available.	No data available.	No data available.
<b>14.6 Special precautions for user</b>	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
<b>14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code</b>	No data available.	No data available.	No data available.
<b>Control Temperature</b>	No data available.	No data available.	No data available.
<b>Emergency Temperature</b>	No data available.	No data available.	No data available.
<b>ADR Classification Code</b>	No data available.	No data available.	No data available.
<b>IMDG Segregation Code</b>	No data available.	No data available.	No data available.

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Global inventory status

Contact 3M for more information. 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.

#### COMAH Regulation, SI 2015/483

Seveso hazard categories, Annex 1, Part 1  
None

Seveso named dangerous substances, Annex 1, Part 2  
None

#### Regulation (EU) No 649/2012, as amended for GB

No chemicals listed

### 15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended for GB.

## SECTION 16: Other information

#### Revision information:

GB Section 02: Other hazards phrase information was added.  
GB Section 04: Information on toxicological effects information was added.  
GB Section 12: Classification Warning information was added.

GB Section 15: Chemical Safety Assessment information was added.  
GBSDS Section 14 Transport in bulk - Main Heading information was added.  
GBSDS Section 14 UN Number information was added.  
Section 1: Product identification numbers information was added.  
Section 01: SAP Material Numbers information was added.  
Section 02: CLP Classification Statements information was deleted.  
Section 02: GB Classification Statements information was added.  
Section 2: Other hazards phrase information was deleted.  
Section 3: Composition/ Information of ingredients table information was added.  
Section 3: Composition/ Information of ingredients table information was deleted.  
Section 4: First aid for ingestion (swallowing) information information was modified.  
Section 04: Information on toxicological effects information was deleted.  
Section 8: Personal Protection - Thermal hazards information information was modified.  
Section 09: Particle Characteristics N/A information was added.  
Section 9: Vapour density value information was modified.  
Section 11: Classification disclaimer information was deleted.  
Section 11: GB Classification disclaimer information was added.  
Section 11: GB No endocrine disruptor information available warning information was added.  
Section 11: No endocrine disruptor information available warning information was deleted.  
Section 12: 12.6. Endocrine Disrupting Properties information was deleted.  
Section 12: 12.6. Other adverse effects information was added.  
Section 12: 12.7. Other adverse effects information was deleted.  
Section 12: Classification Warning information was deleted.  
Section 12: Component ecotoxicity information information was modified.  
Prints No Data if Adverse effects information is not present information was deleted.  
Section 12: No endocrine disruptor information available warning information was added.  
Section 12: No endocrine disruptor information available warning information was deleted.  
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was deleted.  
Section 14 UN Number information was deleted.  
Section 15: Chemical Safety Assessment information was deleted.  
Section 16: Web address information was added.  
Section 16: Web address information was deleted.

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