



## Safety Data Sheet

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<b>Issue Date:</b>	02/17/20	<b>Supersedes Date:</b>	11/21/19

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Dyneon™ PTFE Micropowders TF 9201Z, TF 9202Z, TF 9207Z

#### Product Identification Numbers

97-5000-0286-6, 97-5000-1243-6, 97-5000-1244-4, 97-5000-1245-1, 97-5000-1869-8, 97-5000-2346-6, 98-0213-2749-3, 98-0213-2750-1, 98-0213-3806-0

7000059145, 7000059211, 7010351018, 7000059146, 7100090844, 7010402454, 7100221752

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Fluoropolymer

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Advanced Materials Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	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

Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### 2.2. Label elements

##### Signal word

Not applicable.

##### Symbols

Not applicable.

##### Pictograms

Not applicable.

**Supplemental Information:**

May cause thermal burns.

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
Polytetrafluoroethylene	9002-84-0	100

**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:**

No need for first aid is anticipated.

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

See Section 11.1. Information on toxicological effects.

**4.3. Indication of any immediate medical attention and special treatment required**

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable extinguishing media**

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. 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. Observe precautions from other sections.

**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.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Do not breathe 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/vapors/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

No special storage requirements.

## 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

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:

Full Face Shield

Indirect Vented Goggles

##### Skin/hand protection

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

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

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

## Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

During heating:

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

Half facepiece or full facepiece air-purifying respirator suitable for particulates

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

## Thermal hazards

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

## SECTION 9: Physical and chemical properties

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

#### Appearance

Physical state  
Color

Solid  
White

#### Specific Physical Form:

Fine Powder (less than 10 microns)

#### Odor

Odorless

#### Odor threshold

*No Data Available*

#### pH

*Not Applicable*

#### Melting point

325 - 330 °C [*Details: CONDITIONS: ASTM D 2116*]

#### Boiling Point

*Not Applicable*

#### Flash Point

No flash point

#### Evaporation rate

*Not Applicable*

#### Flammability (solid, gas)

Not Classified

#### Flammable Limits(LEL)

*Not Applicable*

#### Flammable Limits(UEL)

*Not Applicable*

#### Vapor Pressure

*Not Applicable*

#### Vapor Density

*Not Applicable*

#### Density

2.15 g/cm<sup>3</sup>

#### Specific Gravity

2.15 [*Ref Std: WATER=1*]

#### Solubility in Water

Negligible

#### Solubility- non-water

*No Data Available*

#### Partition coefficient: n-octanol/ water

*No Data Available*

#### Autoignition temperature

*Not Applicable*

#### Decomposition temperature

*No Data Available*

#### Viscosity

*Not Applicable*

#### Bulk density

250 - 350 kg/m<sup>3</sup>

#### Molecular weight

*No Data Available*

#### Volatile Organic Compounds

*Not Applicable*

#### VOC Less H<sub>2</sub>O & Exempt Solvents

*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**

None known.

**10.5. Incompatible materials**

Alkali and alkaline earth metals

Reactions with metals in powder form occur from 370 degrees C onwards.

**10.6. Hazardous decomposition products**

<u>Substance</u>	<u>Condition</u>
Carbonyl Fluoride	At Elevated Temperatures - above 380 C
Carbon monoxide	At Elevated Temperatures - above 380 C
Carbon dioxide	At Elevated Temperatures - above 380 C
Hydrogen Fluoride	At Elevated Temperatures - above 380 C
Perfluoroisobutylene (PFIB)	At Elevated Temperatures - above 380 C
Toxic Vapor, Gas, Particulate	At Elevated Temperatures - above 380 C

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.

**Skin Contact:**

During heating:

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

Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

**Eye Contact:**

During heating:

Thermal Burns: Signs/symptoms may include severe pain, redness and swelling, and tissue destruction.

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

**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
Polytetrafluoroethylene	Dermal		LD50 estimated to be > 5,000 mg/kg
Polytetrafluoroethylene	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Polytetrafluoroethylene	Human and animal	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Polytetrafluoroethylene	Professional judgement	No significant irritation

**Skin Sensitization**

Name	Species	Value
Polytetrafluoroethylene	Human	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**

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

**Carcinogenicity**

Name	Route	Species	Value
Polytetrafluoroethylene	Not Specified	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

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

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

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

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Polytetrafluoroethylene	Ingestion	hematopoietic system	Not classified	Rat	NOAEL Not available	90 days

**Aspiration Hazard**

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

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

**SECTION 12: Ecological information****Ecotoxicological information**

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

**Chemical fate information**

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

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

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

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. 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. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

**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**

Not applicable

**15.2. State Regulations**

Contact 3M for more information.

**15.3. Chemical Inventories**

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

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

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional 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.

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: 0 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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# Transport Information Document

Date: July 30, 2020

3M ID Number: 97-5000-1869-8

Product Description: 3M(TM) Dyneon(TM) PTFE TF 9201Z

Transport Protective Service: PROTECTIVE SERVICE NOT REQUIRED

NMFC Item: 156200 NMFC Sub: 00 NMFC Class: 060.0

Flash Point (Closed-cup): No Flash Point

## UNITED STATES DEPARTMENT OF TRANSPORTATION - GROUND (U.S. DOT, 49 CFR)

NOT REGULATED

## UNITED STATES DEPARTMENT OF TRANSPORTATION - VESSEL (U.S. DOT, 49 CFR)

NOT REGULATED

## INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

NOT REGULATED

## INTERNATIONAL MARITIME ORGANIZATION (IMO)

NOT REGULATED

The classification is authorized by the Competent Authority of the United States of America and may not meet the requirements of other competent authorities.

These transportation classifications are provided as a customer service. AS THE SHIPPER YOU REMAIN RESPONSIBLE FOR COMPLYING WITH ALL THE APPLICABLE LAWS AND REGULATIONS, INCLUDING PROPER TRANSPORTATION CLASSIFICATION AND PACKAGING. 3M's transportation classifications are based on product formulations, packaging, 3M policies and 3M's understanding of applicable current regulations and is valid for the original 3M package only. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and NOT THE PACKAGING, LABELING, OR MARKING REQUIREMENTS. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

For Transport Information, please visit [3M.com/Transportinfo](http://3M.com/Transportinfo)  
or call 1-800-364-3577 or 651-737-6501 for assistance.



# Transport Information Document

Date: July 30, 2020

3M ID Number: 98-0213-3806-0

Product Description: 3M(TM) DYNELON(TM) PTFE TF 9202Z, 1 LB, 0.5 KG, SAMPLE

Transport Protective Service: PROTECTIVE SERVICE NOT REQUIRED

NMFC Item: 156200 NMFC Sub: 00 NMFC Class: 060.0

Flash Point (Closed-cup): No Flash Point

## UNITED STATES DEPARTMENT OF TRANSPORTATION - GROUND (U.S. DOT, 49 CFR)

NOT REGULATED

## UNITED STATES DEPARTMENT OF TRANSPORTATION - VESSEL (U.S. DOT, 49 CFR)

NOT REGULATED

## INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

NOT REGULATED

## INTERNATIONAL MARITIME ORGANIZATION (IMO)

NOT REGULATED

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or call 1-800-364-3577 or 651-737-6501 for assistance.



# Transport Information Document

Date: July 30, 2020

3M ID Number: 98-0213-2749-3

Product Description: 3M(TM) Dyneon(TM) PTFE TF 9207Z

Transport Protective Service: PROTECTIVE SERVICE NOT REQUIRED

NMFC Item: 156200 NMFC Sub: 00 NMFC Class: 060.0

Flash Point (Closed-cup): No Flash Point

UNITED STATES DEPARTMENT OF TRANSPORTATION - GROUND (U.S. DOT, 49 CFR)
NOT REGULATED

UNITED STATES DEPARTMENT OF TRANSPORTATION - VESSEL (U.S. DOT, 49 CFR)
NOT REGULATED

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)
NOT REGULATED

INTERNATIONAL MARITIME ORGANIZATION (IMO)
NOT REGULATED

The classification is authorized by the Competent Authority of the United States of America and may not meet the requirements of other competent authorities.

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