Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
3M™ Resin FK-800

Product Identification Numbers
98-0212-3372-5

1.2. Recommended use and restrictions on use

Recommended use
Oil drilling

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

2.2. Label elements

Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable.

2.3. Hazards not otherwise classified
May cause thermal burns.
SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorotrifluoroethylene/Vinylidene Fluoride Copolymer</td>
<td>9010-75-7</td>
<td>100</td>
</tr>
</tbody>
</table>

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
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
None inherent in this product.

5.3. Special protective actions for fire-fighters
When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Use wet sweeping compound or water to avoid dusting. Sweep up.
in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

**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 or professional use only. 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.

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.

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: 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:
During heating:
Use a positive pressure supplied-air respirator if there is a potential for over exposure from an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Physical Form:</strong></td>
<td>Solid</td>
</tr>
<tr>
<td><strong>Specific Physical Form:</strong></td>
<td>Granules</td>
</tr>
<tr>
<td><strong>Odor, Color, Grade:</strong></td>
<td>Off-white granules, odorless.</td>
</tr>
<tr>
<td><strong>Odor threshold</strong></td>
<td>No Data Available</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>No Data Available</td>
</tr>
<tr>
<td><strong>Boiling Point</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>No flash point</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not Classified</td>
</tr>
<tr>
<td><strong>Flammable Limits(LEL)</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Flammable Limits(UEL)</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Vapor Pressure</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Vapor Density</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>2.0 g/cm³</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>Approximately 2 Units not avail. or not appl. [Ref Std: WATER=1]</td>
</tr>
<tr>
<td><strong>Solubility in Water</strong></td>
<td>Nil</td>
</tr>
<tr>
<td><strong>Solubility- non-water</strong></td>
<td>No Data Available</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/ water</strong></td>
<td>No Data Available</td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>No Data Available</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>No Data Available</td>
</tr>
<tr>
<td><strong>Volatile Organic Compounds</strong></td>
<td>0 g/l</td>
</tr>
<tr>
<td><strong>Percent volatile</strong></td>
<td>&lt;=0.50 %</td>
</tr>
<tr>
<td><strong>VOC Less H2O &amp; Exempt Solvents</strong></td>
<td>0 g/l</td>
</tr>
</tbody>
</table>

### 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
Not determined

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

### 10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>At Elevated Temperatures</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>At Elevated Temperatures</td>
</tr>
<tr>
<td>Hydrogen Fluoride</td>
<td>At Elevated Temperatures</td>
</tr>
<tr>
<td>Toxic Vapor, Gas, Particulate</td>
<td>At Elevated Temperatures</td>
</tr>
</tbody>
</table>

Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

### 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:**
Vapors from heated material may cause irritation of the respiratory system. 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:**
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

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
</table>

---
Overall product

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>No data available; calculated ATE &gt; 5,000 mg/kg</th>
</tr>
</thead>
</table>

Chlorotrifluoroethylene/Vinylidene Fluoride Copolymer

<table>
<thead>
<tr>
<th>Dermal</th>
<th>LD50 estimated to be &gt; 5,000 mg/kg</th>
</tr>
</thead>
</table>

Chlorotrifluoroethylene/Vinylidene Fluoride Copolymer

<table>
<thead>
<tr>
<th>Ingestion</th>
<th>LD50 estimated to be &gt; 5,000 mg/kg</th>
</tr>
</thead>
</table>

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorotrifluoroethylene/Vinylidene Fluoride Copolymer</td>
<td>Professional judgement</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

### Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorotrifluoroethylene/Vinylidene Fluoride Copolymer</td>
<td>Professional judgement</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

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

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

### 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 halogen acid (HCl/HF/HBr). 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.

311/312 Hazard Categories:
Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

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 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.

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

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

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

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