



# Fluorel™

## Fluoroelastomer

### FC-2175

---

Description                      Fluorel™ FC-2175 is a copolymer of Vinylidene Fluoride (VF<sub>2</sub> or VDF) and Hexafluoropropylene (HFP).

---

Suggested Applications                      As a binder polymer in infrared-emitting or thermite-type pyrotechnic compositions, FC-2175 provides a tough, stable composition that burns at very high temperatures to provide optimum infrared or heat output. Its elemental composition is relatively low in oxidizable elements such as carbon and hydrogen, so it has a low demand for oxidizer, and can be used in high enough proportion to allow extrusion processing of the dried, solvent-free composition. In polymer bound explosives using materials such as HMX or RDX cyclic nitramines, FC- 2175 provides a high-density, moisture-resistant binder with excellent thermal and oxidative stability.

---

Typical Properties	Appearance . . . . .	Translucent, white-straw
	Form and Size Strip, . . . . .	3/4x 2 x 12"
Not for specification purposes	Mooney Viscosity (ML 1 + 10 @ 250°F) . . . . .	42
	Mooney Viscosity (ML 1 + 4 @ 212°F). . . . .	77
	Specific Gravity (25°C/4°C) . . . . .	1.82
	Solution Viscosity, cps (20% in MEK @ 25°C) . . . . .	120
	Acetone Insolubles, % . . . . .	0.1
	IV (0.1% solids @ 30°C). . . . .	0.85
	Molecular Weight . . . . .	85,000
	Volatiles, % . . . . .	0.15
	Monomer Ratio VF <sub>2</sub> / HFP. . . . .	60/40

---

Storage                      Store at room temperature in original packages.

---

Shelf Life                      At least three years under recommended storage conditions.

---

Packaging                      30 pound net weight boxes.

---

Safety and Toxicology                      Material Safety Data Sheets are available from 3M Performance Materials Division.

---

3M Corporate Headquarters                      **3M Specialty Materials**  
3M Center, Building 223-6S-04  
St. Paul, MN 55144-1000  
**800 367 8905**  
**800 810 8514** (Fax)

---

**Important Notice to Purchaser:** The information in this publication is based on tests that we believe are reliable. Your results may vary due to differences in test types and conditions. You must evaluate and determine whether the product is suitable for your intended application. Since conditions of product use are outside of our control and vary widely, the following is made in lieu of all express or implied warranties (including the warranties of merchantability or fitness for a particular purpose): 3M's only obligation and your only remedy is replacement of product that is shown to be defective when you receive it. In no case will 3M be liable for any special, incidental, or consequential damages based on breach of warranty or contract, negligence, strict tort, or any other theory.



**3M Specialty Materials**

3M Center, Building 223-6S-04  
St. Paul, MN 55144-1000

Issued: 10/00

© 2000 3M IPC

98-0212-XXXX-X (HB)