

3M™ Dyneon™ Fluoroelastomer FPO 3740

Features and Benefits

- Improved water, steam, and base resistance when compared to bisphenol cured fluoroelastomers
- Good press cure physical properties
- Excellent flow properties

Note: Data in this document are not for specification purposes.

Typical Properties

Property	
Fluorine Content	69.5
Specific Gravity	1.88
Color	Translucent
Form	Slab
Mooney Viscosity – ML(1+10) @ 121°C (250°F)	37

Product Description

3M™ Dyneon™ FPO 3740 is a peroxide curable fluoroelastomer terpolymer containing 69.5 wt% fluorine. FPO 3740 can be used in compression, transfer or injection molding, and extrusion processes.

Appropriate local exhaust ventilation such as vapor extractor units should be installed above compounding or processing equipment. When compounding, be sure to read and follow all precautions and directions for use from other compound ingredient suppliers.

Safety and Toxicology

Before processing 3M fluoroelastomers, read and follow all precautions and directions for use contained in the product label and Material Safety Data Sheet (MSDS). General handling precautions and directions for use include:

- (1) Store and use all 3M fluoroelastomers only in well ventilated areas;
- (2) Do not smoke in areas contaminated with dust from 3M fluoroelastomers;
- (3) Avoid eye contact;
- (4) After handling 3M fluoroelastomers wash any contacted skin with soap and water. Potential hazards, including evolution of toxic vapors, can occur during compounding or processing under excessively high temperature conditions.

Storage and Handling

Storage conditions with fluctuations (e.g., high heat, high humidity) may result in changes to Mooney Viscosity of this product. 3M testing indicates final cure rheology properties should not be affected by these fluctuations.

ISO 9001

All 3M fluoroelastomers are manufactured at ISO 9001 registered facilities.

Typical Properties of Vulcanizate

Compound	phr
FPO 3740	100
N-990 MT Carbon Black	30
ZnO	3
TAIC® (72% active)	4
Trigonox™ 101-45B (Varox™ DBPH-50)	4

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**Typical Rheological Properties [ASTM D5289]
Moving Die Rheometer (MDR)
100 cpm, 0.5° Arc, 6 Minutes @ 177°C (350°F)**

ML, Minimum Torque, Inch-lb (dN m)	0.9 (1.0)
t ₂ , Time to 2 inch-lb Rise from Minimum – Minutes	0.4
t'50, Time to 50% Cure – Minutes	0.6
t'90, Time to 90% Cure – Minutes	1.9
MH, Maximum Torque, Inch-lb (dN m)	18.8 (21.2)

**Typical Physical Properties
Press Cure 10 Minutes @ 177°C (350°F)**

Tensile, psi (MPa)	2375 (16.4)
100% Modulus, psi (MPa)	700 (4.8)
Elongation at Break, %	230
Hardness, Shore A	75

Post Cure 2 Hours @ 232°C (450°F)

Tensile, psi (MPa)	3300 (22.7)
100% Modulus, psi (MPa)	920 (6.3)
Elongation at Break, %	220
Hardness, Shore A	78

Compression Set Resistance [ASTM D395 Method B, Buttons]

Aged 70 Hours @ 200°C (392°F), %	40
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Retraction at Lower Temperature [ASTM D1329]

TR10, °C (°F)	-7 (19)
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