-55

Flexible Fluoropolymer

Product Facts

- **Flame retardant**
- **Abrasion and cut through resistance**
- **Flexible**
- **High temperature resistance**
- **High fluid resistance**
- **Environmentally sealed**

Applications

A heat-shrinkable, flexible, flame retardant, fluid and high temperature resistant, modified fluoropolymer molding compound. -55 molded parts are ideal for use in applications where chemical resistance and abrasion resistance is required. A wide range of shapes are available. -55 molded parts are recommended for use in System 300.

Use the System 300 family of parts in military and industrial applications where excellent high temperature performance and good physical and chemical properties are a requirement.

System 300 jacketing is based on a modified fluoropolymer and features a one part epoxy adhesive in tape form.

Installation

This specification covers the requirements for one type of flexible, electrical insulating molded component whose expanded dimensions will reduce to a predetermined size upon the application of heat in excess of 220°C [428°F].

Operating Temperature Range

-65°C to 200°C
[-85°f to 392°F]

Specifications/Approvals

RT-1330

Product Characteristics

Physical	Tensile Strength	psi (MPa)	3500 minimum (24.1)	Section 4.3.3
	Ultimate Elongation	percent	200 minimum	ASTM D 2671
	Specific Gravity	—	2.0 maximum	ASTM D 792
	Low Temperature Flexibility 4 hours at -65 ± 2°C [-85 ± 4°F]	—	No cracking	Section 4.3.4
	Heat Shock 4 hours at 300°C [572°F]	—	No dripping, flowing or cracking	Section 4.3.5
	Heat Resistance 336 hours at 250°C [482°F]	—	—	Section 4.3.6
	Followed by tests for: Tensile Strength Elongation	 psi (MPa) percent	 2000 minimum (13.8) 150 minimum	 Section 4.3.3 ASTM D 2671

Available in:	Americas	Europe	Asia Pacific
	■	■	■

Catalog 1654025
Revised 5-12

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Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

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-55 (Continued)

Product Characteristics
(Continued)

Electrical			
Dielectric Strength	volts/mil	200 minimum	ASTM D 149
Volume Resistivity	ohm-cm	1011 minimum	ASTM D 257
Chemical			
Corrosive Effect 16 hours at 200 ± 3°C [392 ± 5°F]	—	Noncorrosive	Section 4.3.7 ASTM D 2671 Procedure A
Flammability Average Time of Burning Average Extent of Burning	 seconds inches (mm)	 15 maximum 0.5 maximum (12.5)	 ASTM D 635
Fungus Resistance	—	Rating of 1 or less	ASTM G 21
Water Absorption 24 hours at 23 ± 3°C [73 ± 5°F)]	percent	0.5 maximum	ASTM D 570
Fluid Resistance 24 hours at 23 ± 3°C [73 ± 5°F] in: Gasoline, Aviation Grade 100 (ASTM D 910) 1,1,1 Trichloroethane (MIL-T-81533) Coolanol 25 Followed by tests for: Tensile Strength Ultimate Elongation 24 hours at 50 ± 3°C [122 ± 5°F] in: JP-5 (MIL-T-5624) Deicing Fluid (MIL-A-8243) Cleaning Compound (MIL-C-43616) 5% Salt Solution (O-S-1926) Fuel Oil, Diesel (VV-F-800, DF-2) Followed by tests for: Tensile Strength Ultimate Elongation 24 hours at 75 ± 3°C [167 ± 5°F] in: Hydraulic Fluid (MIL-H-5606) Skydrol® 500 Lubricating Oil (MIL-L-2104) Lubricating Oil (MIL-L-7808) Followed by tests for: Tensile Strength Ultimate Elongation	— psi (MPa) percent psi (MPa) percent — psi (MPa) percent	— 3000 minimum (20.7) 150 minimum 3000 minimum (20.7) 150 minimum — 3000 minimum (20.7) 150 minimum	Section 4.3.8 Section 4.3.3 ASTM D 2671 Section 4.3.3 ASTM D 2671 Section 4.3.8 Section 4,3.3 ASTM D 2671
Fluid Resistance 5 hours at 23 ± 3°C [73± 5°F] Tensile Strength Ultimate Elongation	— psi (MPa) Percent	— 3500 minimum (24.1) 150 minimum	Section 4.3.8 Section 4.3.3 ASTM D 2671
Nuclear			Section 4.3.9
Radiation Resistance Followed by tests for: Tensile Strength Ultimate Elongation	 psi (MPa) percent	 3500 minimum (24.1) 150 minimum	—

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