

-125

Flexible Fluoropolymer

Product Facts

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



Applications

A heat-shrinkable, flame retardant, fluid and high temperature resistant, modified fluoropolymer molding compound. A range of shapes is available. -125 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 electrically insulating molded component whose dimensions will reduce to a predetermined size upon the application of heat in excess of 160°C ± 3°C [320°F ± 5°F].

Operating Temperature Range

-55°C to 175°C
[-67°F to 347°F]

Specifications/Approvals

RT-1334

Product Characteristics

Physical	Elastic Memory	Percent	275 minimum expansion 90 minimum retraction	Section 4.3.2
	Tensile Strength	psi (MPa)	4000 minimum (27.5)	Section 4.3.3
	Ultimate Elongation	Percent	300 minimum	ASTM D 412
	Secant Modulus	psi (MPa)	100,000 maximum (689)	Section 4.3.4 ASTM D 882
	Specific Gravity	—	1.85 maximum	ASTM D 792
	Low Temperature Flexibility 4 hours at -57 ± 3°C [-70 ± 5°F]	—	No cracking	Section 4.3.5
	Heat Shock 4 hours at 300 ± 5°C [572 ± 9°F]	—	No dripping, flowing or cracking	Section 4.3.6
	Heat Resistance 168 hours at 250 ± 5°C [482 ± 9°F] Followed by tests for:	—	—	Section 4.3.7.1
	Tensile Strength	psi (MPa)	3500 minimum (24.1)	Section 4.3.3
	Ultimate Elongation	Percent	250 minimum	Section 4.3.3 Section 4.3.7.2
	2000 hours at 150 ± 3°C [302 ± 5°F] Followed by tests for:	—	—	—
	Tensile Strength	psi (MPa)	3500 minimum (24.1)	Section 4.3.3
	Ultimate Elongation	Percent	250 minimum	Section 4.3.3

Available in:	Americas	Europe	Asia Pacific
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Product Characteristics
(Continued)

Materials

-125 (Continued)

Electrical			
Dielectric Strength	Volts/mil (kV/mm)	300 minimum (11.9)	ASTM D 149
Volume Resistivity	ohm-cm	1013 minimum	ASTM D 257
Chemical			
Corrosive Effect 16 hours at 175 ± 3°C [347 ± 5°F]	—	Noncorrosive	Section 4.3.8 ASTM D 2671 Procedure A
Flammability Initial			
Average Time of Burning	Seconds	15 maximum	ASTM D 635
Average Extent of Burning After Fluid Immersion 24 hours at 23 ± 3°C [73 ± 5°F] Gasoline, Automotive, Combat MIL-G-3056	Inches (mm)	1 maximum (25)	Section 4.3.10
Fuel Oil, Diesel VV-F-800 DF-2 Turbine Fuel, Aviation, JP-4 MIL-T-5624	Seconds Inches (mm)	30 maximum 1 maximum (25)	ASTM D 635
Average Time of Burning Average Extent of Burning			
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] Gasoline, Automotive, Combat MIL-G-3056 24 hours at 50 ± 3°C [122 ± 5°F] Fuel Oil Diesel VV-F-800 DF-2 Turbine Fuel, Aviation, JP-4 MIL-T-5624 Electrolyte 10873919 5% Salt Solution O-S-1926 Anti-Icing & Defrosting Fluid MIL-A-8243 Lube Oil, Aircraft, Synthetic MIL-L-23699 Lube Oil MIL-L-2104 Lube Oil, Aircraft, Synthetic MIL-L-7808 24 hours at 100 ± 3°C [212 ± 5°F] Hydraulic Fluid, Synthetic MIL-H-46170 4 hours at 50 ± 3°C [122 ± 5°F] Cleaning Compound PC-437 5 hours at 23 ± 3°C [73 ± 5°F] Decontaminating Agent, DS-2 MIL-D-50030 Decontaminating Agent STB MIL-D-12468 Followed by tests for:	—	—	Section 4.3.9
Tensile Strength	psi (MPa)	3000 minimum (20.7)	Section 4.3.3
Ultimate Elongation	Percent	250 minimum	Section 4.3.3
Weight Increase	Percent	3 maximum	Section 4.3.9
Adhesive Compatibility Lap Shear Strength NSM to S-1264 to DCNS	psi (kPa)	100 minimum (689)	Section 4.3.11
Nuclear			
Radiation Resistance Followed by tests for:			Section 4.3.12
Tensile Strength	psi (MPa)	4000 (27.6)	Section 4.3.3
Ultimate Elongation	Percent	250	