

DuPont Performance Polymers Kalrez® 4079 FFKM Perfluoroelastomer

Category : Polymer , Thermoset , Fluoropolymer, TS , Thermoset Fluoroelastomer , Rubber or Thermoset Elastomer (TSE)

Material Notes:

A low compression set compound for general-purpose use in O-rings, diaphragms, seals, and other parts used in the process and aircraft industries. It is a carbon black-filled compound with excellent chemical resistance, good mechanical properties, and outstanding hot air aging properties. It exhibits low swell in organic and inorganic acids and aldehydes and has good response to temperature cycling effects. Max recommended operating temperature is 316°C, with short excursion to higher temperatures possible. This compound is not recommended for use in hot water/steam applications or in contact with certain hot aliphatic amines, ethylene oxide, or propylene oxide. Data provided by DuPont Dow Elastomers. This former DuPont Dow Elastomers product line is now produced by DuPont Performance Elastomers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Kalrez-4079-FFKM-Perfluoroelastomer.php

Physical Properties	Metric	English	Comments
Density	1.90 - 2.00 g/cc	0.0686 - 0.0723 lb/in³	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	70 - 80	70 - 80	ASTM D2240
Tensile Strength, Ultimate	16.9 MPa	2450 psi	ASTM D412
Elongation at Break	150 %	150 %	ASTM D412
100% Modulus	0.00720 GPa	1.04 ksi	ASTM D412
Compression Set	25 % @Temperature 204 °C	25 % @Temperature 399 °F	70 hr at 204°C; ASTM D395B; Pellets

Thermal Properties	Metric	English	Comments
CTE, linear	229 µm/m-°C	127 µin/in-°F	
	@Temperature 22.0 - 100 °C	@Temperature 71.6 - 212 °F	
	230 µm/m-°C	128 µin/in-°F	
	@Temperature 22.0 - 260 °C	@Temperature 71.6 - 500 °F	
Specific Heat Capacity	0.945 J/g-°C	0.226 BTU/lb-°F	
	@Temperature 50.0 °C	@Temperature 122 °F	
	0.974 J/g-°C	0.233 BTU/lb-°F	
	@Temperature 100 °C	@Temperature 212 °F	

Thermal Properties	Metric W/m-K	English BTU-in/hr-ft ² -°F	Comments
	@Temperature 150 °C	@Temperature 302 °F	
Thermal Conductivity	0.170 W/m-K	1.18 BTU-in/hr-ft ² -°F	
	@Temperature 200 °C	@Temperature 392 °F	
	0.180 W/m-K	1.25 BTU-in/hr-ft ² -°F	
	@Temperature 100 °C	@Temperature 212 °F	
	0.190 W/m-K	1.32 BTU-in/hr-ft ² -°F	
	@Temperature 50.0 °C	@Temperature 122 °F	
Maximum Service Temperature, Air	316 °C	601 °F	Maximum recommended service temperature.
Brittleness Temperature	-50.0 °C	-58.0 °F	ASTM D746

Electrical Properties	Metric	English	Comments
Electrical Resistivity	5.00e+17 ohm-cm	5.00e+17 ohm-cm	
Dielectric Constant	4.9	4.9	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	>= 17.7 kV/mm	>= 450 kV/in	
Dissipation Factor	0.0050	0.0050	
	@Frequency 1000 Hz	@Frequency 1000 Hz	

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