FF200-75

Parker's ULTRA™ FFKM Material for AMS 7257 Aerospace Applications

High Temperature Capability:

Parker's ULTRA FF200 seal material is part of an ever-growing family of FFKM compounds. Formulated to provide ultimate sealing, these compounds handle continuous exposure to high temperature, provide near universal chemical compatibility, have high sealing force retention, low compression set and outstanding mechanical properties.

Aerospace applications for AMS 7257 material are characterized by severe high temperatures

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Typical Applications:

- Gas turbine engine lubrication systems
- Bleed air management and ducting systems
- High temperature propulsion units and their associated control devices utilizing NTO, MMH, JP4 and other strong oxidizers/propellants
- Any environments in which high heat and aggressive chemistries are present

Features:

- High temperature range up to 608°F
- Low compression set
- High seal force retention
- Fluid compatibility

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FF200-75 Test Report LTR 88146 (part size 2-214) to AMS 7257 Rev. D			
Original Physical Properties			
Hardness, shore A, pts.	ASTM D2240	75±	75
Tensile strength, psi, min	ASTM D1414	1500	1727
Ultimate elongation, %	ASTM D1414	120	146
Specific gravity, ±0.02	ASTM D297	Preproduction Value	2.02
Compression set, 70hrs. @230°C (446°F)			
Percent of original deflection, max	ASTM D395 Method B	40	25
Compression set, 336 hrs. @230°C (446°F)			
Percent of original deflection, max	ASTM D395 Method B	55	38
Dry heat resistance, 70hrs. @290°C (554°F)			
Hardness change, pts.	ASTM D573	-5 to +5	0
Tensile change, %		-20	+6
Elongation change, %		-5	+44
Weight loss, max		5	1
Fluid immersion AMS 3085 oil, 70 hrs. @200°C (392°F)			
Hardness change, shore A pts.	ASTM D471	-5 to +5	0
Tensile strength change, %		-10	+3
Ultimate elongation change, %		-15	+8
Volume change, %		0 to +5	+1
Compression set, max	ASTM D395 Method B	25	11
Fluid immersion AS1241, type IV, class 1 or 2 fluid, 70 hrs. @125°C (257°F)			
Hardness change, shore A pts.	ASTM D471	-15 to 0	-1
Tensile strength change, %		-40	-4
Ultimate elongation change, %		-15	+4
Volume change, %		0 to +15	+3
Fluid immersion reference fuel B, 70hrs. @ 23°C (73°F)			
Hardness change, shore A pts.	ASTM D471	-5 to +5	+1
Tensile strength change, %		-20	+7
Ultimate elongation change, %		-15	+4
Volume change, %		0 to +5	+1
Low temperature			
TR-10, °C(F)	ASTM D1329	+5(+41)	-1(+30)

and intricate and varied media environments. The AMS 7257 specification establishes a baseline for elastomeric materials considered capable of withstanding long term exposure to 550°. When the operating environment demands extreme sealing performance, customers often specify a material that exceed the AMS 7257 standard.

ULTRA FF200 exhibits superior retention of mechanical properties and resistance to compression set after long term high temperature and fluid exposure. FF200 accomplishes this without the cost penalty normally associated with performance enhancements.

ULTRA™

WARNING:

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS CAN CAUSE EQUIPMENT FAILURE OR DAMAGE, PERSONAL INJURY OR DEATH.

For safe and trouble-free use of these products, it is important that you read and follow the Parker Seal Group Product Safety Guide. This Safety Guide can be referenced and downloaded free of charge at www.parkerseals.com. It is also printed in major Seal Group product catalogs, and can be ordered by telephone without charge as Parker Publication No. PSG 5004 by calling 1-800-C-PARKER.

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