

Parker's V1289-75

Aerospace Market

Parker's V1289-75 low temperature fluorocarbon compound offers the best low temperature sealing performance of any fluorocarbon rubber material available in the market.

Low temperature performance has long been the Achilles' heel of fluorocarbon elastomer technology. Standard fluorocarbon copolymer compounds can seal down to about -15°F (-26°C). Low temperature (GLT-type) fluorocarbon compounds offer low temperature flexibility down to -40°F (-40°C) and improved HTS oil stability, but they sacrifice compression set. Parker's Fluorocarbon Fact Sheet has more information about these other grades of fluorocarbon rubber.

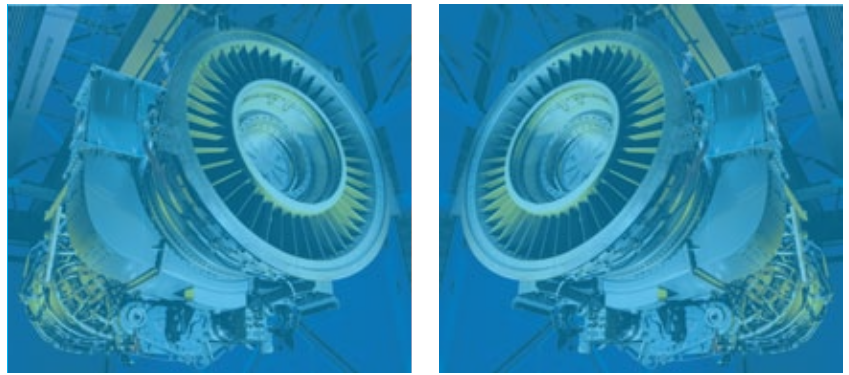
With a TR-10 of -40°F (-40°C), V1289-75 offers reliable dynamic sealing down to -40°F and static sealing down to -55°F (-48°C) in the most demanding seal applications.

Advantages:

- Better low temperature rating than AMS-R-83485 fluorocarbon and AMS 7276 FKM
- Lower volume swell in fuels than fluorosilicone, nitrile, GLT fluorocarbon
- Better compression set than nitrile
- Better wear resistance than fluorosilicone
- No dry-out shrinkage
- Better high temperature rating than nitrile and fluorosilicone
- Better wear and tear properties than fluorosilicone

Typical Applications:

- MIL-PRF-5606
- MIL-PRF-83282
- MIL-PRF-87257 hydraulics
- Jet fuel
- Biojet
- HTS turbine oils (MIL-PRF-23699)
- Bleed air
- Environmental sealing



V1289-75 (AS568-214 size, AMS 7379 spec)			
Original Physical Properties	Test method	Spec limits	Test results
Hardness, Shore A, pts.	ASTM D2240	75 ± 5	76
Tensile strength, psi	ASTM D412	1300	1549
Ultimate elongation, %	ASTM D412	120	129
Modulus at 100% elongation, psi	ASTM D412		1075
Specific Gravity	ASTM D297		1.87
Compression Set 336 hrs. @ 275°F in MIL-PRF-83282			
% of original deflection, max.	ASTM D395 Method B	35	14
Compression Set 22 hrs. @ 392°F			
% of original deflection, max.	ASTM D395 Method B	20	14
Compression Set 336 hrs. @ 392°F Reference Oil 300			
% of original deflection, max.	ASTM D395 Method B	55	50
Dry Heat Resistance (70 hrs. @ 518°F)			
Hardeness change, pts.	ASTM D573	-10 to +5	0
Tensile change, %		-45	-30
Elongation change, %		-10	+18
Weight loss %		10	-4
Fluid Immersion Reference Oil 300, (70 hrs. @ 392°F)			
Hardness change, Shore A pts.	ASTM D471	-10	0
Tensile strength change, %		-30	-8
Ultimate elongation change, %		-20	+17
Volume change, %		0 to +10	+5
Fluid Immersion Fuel B, (70 hrs. @ R.T.)			
Hardness change, Shore A, pts.	ASTM D471	-10	0
Tensile strength change, %		-35	-23
Ultimate elongation change, %		-20	-4
Volume change, %		1 to +10	+4
Fluid Immersion Reference Oil 300, (70 hrs. @ 275°F)			
Hardness change, Shore A pts.	ASTM D471	-10	-1
Tensile strength change, %		-30	-8
Ultimate elongation change, %		-20	+15
Volume change, %		0 to +10	+3
Fluid Immersion MIL-PRF-83282, (70 hrs. @ 275°F)			
Hardness change, Shore A, pts.	ASTM D471	-7	-1
Tensile strength change, %		-25	-6
Ultimate elongation change, %		-15	+19
Volume change, %		+6	+1
Low Temperature			
TR-10, °C	ASTM D1329	-38	-39