

FF252-75: FFKM Material for AMS 7257 Aerospace Applications

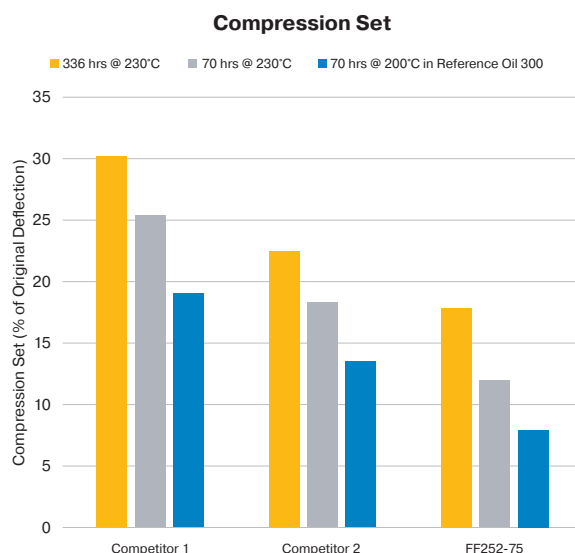
Manufactured Without the Use of Fluorosurfactants

FF252-75 is a black perfluorinated elastomer that offers excellent resistance to high heat and a wide range of fluids. It exceeds the requirements of AMS 7257, demonstrating its ability to withstand the high temperatures and harsh fluids in aerospace engine oil, fuel, and hydraulic system environments.

FF252-75's high temperature sealing abilities can be seen through its compression set resistance. Compared to competitor materials, it demonstrates lower compression set in all test conditions required by AMS 7257. Better compression set resistance means longer seal life.

Key Features

- Manufactured without the use of fluorosurfactants in compliance with current regulatory environment
- Long-term extreme high temperature stability
- Low compression set
- Resistance to a wide range of fluid chemistries
- Available in O-rings and customer molded shapes
- AMS 7257 QPL Listed
- Recommended temperature range of 5 to 608°F (-15 to 320°C)



Of primary note is FF252-75's retention of its mechanical properties after exposure to high heat and fluid immersion. This illustrates the material's integrity and reliability even in the extreme environments of aerospace applications.

FF252-75 Qualification Report to AMS 7257 Rev E

		Spec Limits	Test Results
Original Physical Properties			
Hardness, Shore A, pts	ASTM D2240	75 ± 5	79
Tensile Strength, psi, min	ASTM D1414	1500	1827
Ultimate Elongation, %, min	ASTM D1414	120	142
Specific Gravity	ASTM D297	Preproduction Value ± 0.02	2.3
Dry Heat Resistance, 70 hrs. @ 290°C (554°F)			
Hardness Change, pts.	ASTM D573	-5 to 5	1
Tensile Change, %, max		-20	-13
Elongation Change, %, max		-5	15
Weight Loss, %, max		5	-1
Fluid Immersion, Reference Fuel B, 70 hrs. @ 23°C (73°F)			
Hardness Change, pts.	ASTM D471	-5 to 5	-1
Tensile Change, %, max		-20	0
Elongation Change, %, max		-15	6
Volume Change, %		0 to 5	1
Fluid Immersion, Reference Oil 300, 70 hrs. @ 200°C (392°F)			
Hardness Change, pts.	ASTM D471	-5 to 5	-1
Tensile Change, %, max		-10	0
Elongation Change, %, max		-15	6
Volume Change, %		0 to 5	1
Compression Set, % of Original Deflection, max	ASTM D395 Method B	25	8
Fluid Immersion, Exxon HyJet IV-A Plus, 70 hrs. @ 125°C (257°F)			
Hardness Change, pts.	ASTM D471	-15 to 0	-2
Tensile Change, %, max		-40	-28
Elongation Change, %, max		-15	10
Volume Change, %		0 to 15	2
Low Temperature			
TR-10, °C (°F), max	ASTM D1329	5 (41)	2 (35.6)

Additional Compression Set Testing Not Required by AMS7257*

		ASTM D395 Method B Test Results
Compression Set, 70 hrs. @ 230°C (446°F)		
% of Original Deflection, max		12
Compression Set, 336 hrs. @ 230°C (446°F)		
% of Original Deflection, max		18
Compression Set, 70 hrs. @ 260 °C (500°F)		
% of Original Deflection, max		23
Compression Set, 336 hrs. @ 260 °C (500°F)		
% of Original Deflection, max		37
Compression Set, 70 hrs. @ 287°C (550°F)		
% of Original Deflection, max		31
Compression Set, 336 hrs. @ 287 °C (550°F)		
% of Original Deflection, max		63

*Tested on 2-214 O-rings at 25% compression, with no splitting or breaking

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