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## O-Ring Compound F50 Data Sheet

Material: Fluorosilicone Rubber (FVMQ)  
50 Durometer, Blue

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### **General Information:**

Fluorosilicone (FVMQ) is like side chains of silicone rubber, bonding trifluoropropyl, methyl and vinyl. The mechanical and physical properties are similar to VMQ. However, FVMQ offers improved fuel and mineral oil resistance, but less hot air resistance than standard VMQ.

### **Cure System:** *Peroxide-cured*

Standard FVMQ compounds are peroxide-cured.

**Temperature Range:** -60°C (-76°F) to 177°C (350°F)

### **Attributes:**

Color: Blue

50±5 Shore A durometer

Shelf-life: Unlimited

### Performs Well In:

- Fuels
- Aromatic mineral oils
- Benzene, Toluene
- Ozone and weather

### Doesn't Perform Well In:

- Brake fluids
- Ketones
- Hydrazine

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## TEST REPORT FOR O-RING COMPOUND F50

MATERIAL: FLUROSILICONE

DUROMETER: 50

COLOR: BLUE

ASTM\* D2000 M2FK506 A19 EF31 EO36 C32 F19 Z1

SECTION OF SPEC.	PROPERTIES	REQUIREMENTS	RESULTS	ASTM TEST METHOD
	<b>ORIGINAL PHYSICAL PROPERTIES</b>			
	Hardness, Shore A	50±5	48	D2240-15
	Tensile Strength, psi (MPa)	870(min)	1022(7.05)	D412-16
	Elongation, min, percent	150(min)	365	D412-16
	Modulus @ 100%, psi (Mpa)		245(1.69)	D412-16
	Density,(Mg/m <sup>3</sup> )		1.52	CNS 5341-96A
A19	<b>HEAT AGE</b>			D573-04
	<b>70 hours at 225°C</b>			
	Hardness Change, points	+15(max)	-5	
	Tensile Strength Change, percent	-45(max)	-34	
	Elongation Change, percent	-45(max)	-22	
Z1	<b>COMPRESSION SET</b>			D395-16B
	<b>22 hours at 175°C, percent</b>	25%(button)(max)	5.8	
EF31	<b>ASTM FUEL C RESISTANCE</b>			D471-16a
	<b>70 hours @ 23°C</b>			
	Hardness Change, points	-15~0	-7	
	Tensile Change, max, percent	-60(max)	-20	
	Elongation Change, max, percent	-50(max)	-17	
Volume Change, percent	0~+25	+24.8		
EO36	<b>IRM 903 OIL</b>			D471-16a
	<b>70 hours at 150°C</b>			
	Hardness Change, points	-10~0	-3	
	Tensile Change, max, percent	-35(max)	-13	
	Elongation Change, max, percent	-30(max)	-7	
Volume Change, percent	0~+10	+4.3		
C32	<b>OZONE RESISTANCE, 50pphm</b>			D1171-16
	<b>70 hours at 40°C</b>	no-cracks	pass	
F19	<b>LOW-TEMP BRITTLNESS POINT TEST</b>	no-cracks	pass	D2137-11A
	<b>3 minute @ -55°C</b>			
	Sample type: T-50			
	Coolant: Isopropyl Alcohol			
	Brittleness temp to nearest 1°C			

F50