

# The O-Ring Store LLC



We make getting o-rings easy!

## **SILICONE FDA 70 DUROMETER DATA SHEET FOR COMPOUND S70**

### **Compound Features:**

- ASTM, Military and \*FDA compliance\* for use in food and medical applications.
- Odorless and nontoxic.
- Broad temp range -80°F to +400°F (-60°C to +204°C).
- Excellent dry heat resistance.
- Excellent resistance to sun/UV light, ozone, and weathering.
- Good compression set resistance.
- Excellent permeation resistance.

### **Compound Limitations:**

- Limited to static sealing applications.
- Not recommended for use with ketones (MEK), acids, silicone oils, and brake fluids.
- Poor wear and abrasion resistance.
- Easily cut or sliced on sharp machined edges.
- Poor short term resilience.

### **ASTM Callout:**

ASTM D2000-99 Grade M5GE706 A19 B37 EO16 EO36 EA14

F19 G11 ZZ\R-765B Class 2a & 2b, Grade 70

AMS 3304 (Size per AS3582 which replaced MS 9068) Specification

### **\*FDA per CFR 177.2600\***

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ORIGINAL PROPERTIES					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	S70 Compound Property
Durometer	-	-	Shore A	75 ± 5	76
Tensile Strength			PSI (MPa)	1450 (10) Min.	1773 (12)
Elongation Resistance			%	150 Min.	160
Specific Gravity			-	-	2.02

HEAT AGE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	S70 Compound Property
Durometer Change	A19	70 Hours @ 225°C	Shore A	+10	+4
Tensile Strength Change			%	-25	-14.3
Elongation Resistance Change			%	-30	-18.4

COMPRESSION SET					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	S70 Compound Property
Original Deflection	B37	22 Hours @ 175°C	Shore A	+10 Max.	+4
		70 Hours @150°C	%	-25 Max.	-14.3

TEAR RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	S70 Compound Property
Tear Resistance	G11	Die B	PPI (Kn/M)	51 (9)	107 (18.8)

Information within is believed to be accurate and reliable. However, The O-Ring Store, LLC makes no warranty, expressed or implied, that parts supplied in this material will perform satisfactorily in specific applications. It's the customer's responsibility to evaluate the material prior to use.

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ASTM #1 OIL RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	S70 Compound Property
Durometer Change	EO16	70 Hours @ 150°C	Shore A	0 to -15	-7
Tensile Strength Change			%	-20	-2.9
Elongation Resistance Change			%	-20	0
Volume Change			%	0 to +10	+6.4

ASTM #3 OIL RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	S70 Compound Property
Durometer Change	EO36	70 Hours	Shore A	-30 Max.	-20
Volume Change		@ 150°C	%	+60 Max.	+35

WATER RESISTANCE					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	S70 Compound Property
Durometer Change	EA14	70 Hours	Shore A	±5	-1
Volume Change		@ 100°C	%	±5	+2.5

LOW TEMPERATURE BRITTLENESS					
Properties	ASTM Designation	Test Method	Unit of Measure	ASTM D2000 Specification	S70 Compound Property
Durometer Change	F19	ASTM D2137 3 Mins @ -55°C	Pass/Fail	Non-Brittle	Pass
Volume Change		ASTM D2137 3 Mins @ -35°C			Pass

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