F1000 MATERIAL SUMMARY

70 Durometer, Blue, Commercial Grade

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Fluorosilicone is a widely used elastomer that can be compounded to meet a wide range of applications. When compared with silicone, fluorosilicone offers improved fuel and mineral oil resistance but poor hot air resistance. This material is widely used in semiconductor ashing equipment for its resistance to oxygen plasma.

ABOUT #F1000

F1000 is a commercial grade, 70A durometer fluorosilicone.

FEATURES

- Excellent flexibility and resistance to compression set
- Excellent resistance to aging and weather-sunlight
- Resistance to oxidizing chemicals, animal and vegetable oils, fuels, aromatic and chlorinated solvents
- Resistant to diluted alkalies, diester oils, aliphatic and aromatic fluorocarbons, silicone oil, toluene, benzene, ozone and oxidative environments.

APPLICATION EXAMPLES

- Aerospace
- Semiconductor ashing
- Aerospace

ADDITIONAL INFORMATION

- Service Temperature of -100° to 350°F
- Spec: ASTM D2000 M2FK706 A19 B37 F19

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PHYSICAL PROPERTIES

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	70 +/- 5	67
Color	Blue	Blue
Tensile Strength, psi	865	1000
Ultimate Elongation	150	180
Specific Gravity	-----	1.38
HEAT RESISTANCE – A19, ASTM D 573 (70 hrs. @ 275°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, Shore A, ASTM D2240	-5 to +10	+3
Tensile Strength Change, %, ASTM D412	-25 (max)	-14
Ultimate Elongation Change, %, ASTM D412	-25 (max)	-22
COMPRESSION SET – B37, ASTM D 395 Method B (22 hrs. @ 175°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set %	25 (max)	11
FLUID RESISTANCE –ASTM #1 Oil – ASTM D 471 (70 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, Shore A, ASTM D2240	-	0
Tensile Strength Change, %, ASTM D412	-	7
Ultimate Elongation Change, %, ASTM D412	-	-2
Volume Change, %, ASTM D412	-	5
FLUID RESISTANCE – ASTM #3 Oil - ASTM D 471 (70 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, Shore A, ASTM D2240	-	-2
Tensile Strength Change, %, ASTM D412	-	-9
Ultimate Elongation Change, %, ASTM D412	-	-7
Volume Change, %, ASTM D412	-	1
LOW TEMPERATURE RESISTANCE – F19, ASTM D2137 Method A, 9.3.2	ASTM D2000 Requirements	Typical Test Results
Non-brittle after 3 min. @ -55°C	Non-Brittle	Non-Brittle