

TECHNICAL DATASHEET

Cellular Silicone Elastomer

Temperature Range: -60°C to 200°C

AVAILABILITY

The range of cellular silicone elastomers is available as profile extrusions, jointed rings, sheeting, which can be self-adhesive backed, strip and punchings. They are particularly suited to use in high temperature seals and gaskets, where a soft, easily deformed rubber is required. There is a full range of standard colours. Sheeting is available in standard rolls of width 1m; other widths can be produced upon request.

Other specific sponge grades available include Flame retardant grades, 515 & 524 AFS1682, AMS3195, AMS3196 & BMS 1-60

SPECIFICATIONS

These products meet the flammability requirements of FAR 25.853 (a)(1)(iv) and (a)(1)(v) horizontal flammability tests.

The sponge is predominately-closed cell with low water absorption

GENERAL CHARACTERISTICS FOR CELLULAR SILICONE ELASTOMER

Brittle Point	-80°C (-112 °F)	ASTM D746
Limiting Oxygen Index	24.0 %	BS 2872 Part 1
Thermal Conductivity	0.24 W.m ⁻¹ .K ⁻¹	VDE 0304
Radiation Resistance	>10 ⁵ Grays (10 ⁷ Rads) typical	
Dielectric Strength	23 kV.mm ⁻¹	VDE 0303
Dielectric Constant	2.9	VDE 0303
Dissipation Factor @ 50c/s	3x10 ⁻⁴	VDE 0303
Volume Resistivity	3x10 ¹⁵ Ω.cm	VDE 0303

ENVIRONMENTAL RESISTANCE

Silicone rubber products have an excellent resistance to ozone, oxidation, ultraviolet light, corona discharge, cosmic radiation, ionising radiation and weathering in general.

Silicone rubber products produce very low levels of toxic fume when burnt. During testing to ATS 1000.001 none of the following gases were produced in detectable amounts: HCN, CO, NO, NO₂, SO₂, -H₂S, HF, HCl.

MECHANICAL PROPERTIES

Property	Units	200		250		400		530		Test Method
		Specification Limits	Typical Value	Specification Limits	Typical Value	Specification Limits	Typical Value	Specification Limits	Typical Value	
*Density	kg.m ⁻³	200 ±40	195	250 ±40	256	400 ±40	400	530 ±40	550	BSENISO 845
**Hardness	Shore OO #Shore A	35 ±5 <5	35	45 ±5 5 ±2	45	65 ±5 17 ±3	64	80 ±5 30 ±10	82	ASTM D2240
**Compression Stress 40% strain	kPa	50 ±40	50	90 ±40	90	160 ±40	160	580 ±150	584	BSENISO 3386 part 1,2
Tensile Strength	N.mm ⁻²	0.5 min.	0.9	0.75 min.	1.2	1.0 min.	1.6	1.5 min.	3.2	BSENISO 1798
Elongation to failure	%	75 min.	120	100 min.	200	75 min.	150	100 min.	190	BSENISO 1798
Compression Set 22 hours @ 70°C	%	20 max.	16	15 max.	10	15 max.	10	15 max.	10	BSENISO 1856 Type A