

Product description:

Silicone rubber is an elastomer (rubber-like material) composed of silicone itself a polymer containing silicone together with carbon, hydrogen and oxygen.

Chemistry:

In contrast to the other polymeric insulation materials, silicones (also known as polydimethylsiloxanes) are not made up of carbon to carbon backbone. Rather, they consist of repeating silicone-oxygen (siloxanes) groups with two methyl groups each bonded to the silicone. As such, they differ widely from hydro-carbon based materials. One accepted standard abbreviation for silicones is VMQ, where Q stands for rubber having silicone and oxygen in the polymer chain while M indicates that the material mainly contains methyl groups (CH₃). V stands for the Vinyl groups (R-CH=CH₂).

Properties:

Excellent resistance to heat and oxidative stability, outstanding low temperature flexibility, excellent resistance to ozone and sunlight (UV). They also offer a wide operational temperature range.

Applications:

Automotive applications, food applications, electrical applications, medical and health care applications.

Service temperature:

-80 °C to 200 °C

Product ranges:

Fuel line seals, engine gaskets and O-rings.

Physical properties:

S.NO	Description	ASTM Test Method	Unit	Specification
I	Hardness	D2240	Shore A	60 ± 5
II	Density	D792	gm/cc	1.17± 0.05
III	Tensile Strength (Min)	D412	MPa	6
IV	Elongation @ break (Min)	D412	%	250
V	Compression Set (Max) 22hrs@175°C	D395 Method B	%	25
VI	Heat Aging 70hrs @ 225°C Hardness Change Tensile Change (Max) Elongation Change (Max)	D573	Shore A % %	+ 10 - 40 - 30
VII	ASTM : 1 Oil Ageing 70hrs@ 150°C Hardness Change (Max) Tensile Change (Max) Elongation Change (Max) Volume Change (Max)	D471	Shore A % % %	0 to - 15 - 25 - 25 + 20

NOTE: The Above Compound meets as per ASTM D2000 M2 GE 606 A19 B37 E016

The technical datasheets are derived on the basis of the service conditions and end user preference in which the values derived are given over a range of specifications which are cross checked over a variety of trials and approved with the end user conditions and calculated over a prolonged time



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