

STANDARD ENGINEERING INSTRUCTION

SILOCELL White Silicone Sponge

DSM 5.1.7

1. Definition

Most commercially available silicone sponge products are made from gum-based polydimethylsiloxane (PMDS). The polymer is chemically expanded when heat cured to create the closed cell sponge structure. Closed cell means that the cells are non-interconnecting; therefore, they do not allow water to wick through the sponge. Generally, silicone sponges have superior mechanical properties and are considered to have a complete closed cell structure.

Expanded closed cell silicone sponge offers many of performance benefits of solid silicone in a softer and more compliant form.

2. Current Application:

The Material used as gaskets on a several of PSP Tooling's (TRS Caps, Dedicated Tooling, Strip Tooling).

3. Product Assembly:

The silicone sheets from Polymax are available in 1 metre widths and can be bought in a 10-metre roll or cut to varying lengths of full 1 metre. Colour is white and comes in a range of thicknesses between 1.5mm and 30mm.

4. Physical Properties:

Operating temperature range: -40°C to 200°C

Physical Property	Test Method	Units	Typical Values
Density:		g/cm ³	0.25
Hardness:	ASTM D412	ShA	5
Elongation at Break:	ASTM D412	%	145
Tensile Strength:	ASTM D412	MPa	0.6
Compression Set 50% 25hrs @70:		%	3.8
Brittle Point:	ASTM D746	°C	-80
Thermal Conductivity:	VDE 0304	W.m ⁻¹ .K. ¹	0.24
Limiting Oxygen Index:	BS 2782 Part 1	%	24
Radiation Resistance:		Grays	>105
Dielectric Strength:	VDE 0303	kV.mm-1	23
Dielectric Constant:	VDE 0303		2.9
Dissipation Factor:	VDE 0303		3x10 ⁻⁴
Volume Resistivity:	VDE 0303	ohms.cm	3x10 ¹⁵
Water Absorption:	ASTM D1056	%	<5

5. Drawing Call-Out:

Current Thickness available are:

- DSM 5.1.7_White 2MM
- DSM 5.1.7_White 4MM

6. Approvals:

FAR 25/ JAR 25 /CS 25 Horizontal Flammability Tests and Automotive Standard Part 571MVSS302, REACH and RoHS.

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7. Health and Safety:

When handling any chemical products, read the manufacturer's container labels and the Safety Data Sheets (SDS) for important health, safety, and environmental information.

https://www.polymax.co.uk/media/documents/Datasheet/Silicone_Sponge_MSDS.pdf.

IMPORTANT! When using any equipment, always follow the manufacturer's instructions for safe operation.

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