

Silicone Sponge

JEHBSIL® SP Series

Technical Datasheet



Material Overview

Jehbsil silicone sponge is a unique, high-performance expanded silicone elastomer. Expanded closed-cell silicone is extremely compressible, while the closed-cell structure prevents any fluids from passing through the silicone bulk. This allows closed-cell silicone to form airtight seals with very low sealing loads. Standard sponge grades are extremely soft, and are particularly suitable for lighting gaskets and construction applications.

Expanded silicone is produced by incorporating air into the bulk of the elastomer during the manufacturing process. The air forms minuscule, well-dispersed bubbles throughout the silicone. The incorporation of air increases elastomer compressibility and softness, while also lowering its density. In closed-cell silicone, all air inclusions are completely enclosed by rubber, allowing it to form watertight seals. Standard silicone sponge is created using peroxide curing rubber.

Key sponge grade features include:

- Extremely low hardness
- Low density
- Uniform, closed-cell structure
- Excellent chemical and UV stability
- Excellent thermal stability (-40 to 200°C)
- Good thermal insulation
- Airtight seals with low sealing loads
- Custom colour pigmentable (excluding black)



Technical Specifications

Property	Typical Values				Inspection Method
	Unit	Jehbsil Platinum Material Codes			
		SP-20 Base	SP-40 Base	SP-60 Base	
Hardness	Shore A	~8	~15	~25	DIN 53505
Density	g/cm ³	0.4-0.7	0.4-0.7	0.4-0.7	BENISO 845
Tensile Strength	N/mm ²	1.7	1.2	1.9	ASTM D412
Elongation at Break	%	550	420	240	ASTM D412
Compression Set ¹	%	43	9.5	29.2	ASTM D1056
Compression Deflection ²	kPa	34	65	90	ASTM D1056
Autoignition Temp.	°C	>400			DIN 51794
Service Temp.	°C	-60 to +200			ASTM D2000
Water Absorption	%	<5			ASTM D1056
Cell Classification		Closed-Cell			ASTM D1056
RoHS		Compliant			RoHS 2015

¹ Compression Set Measured at 22 hrs at 100°C.

² Compression Deflection Measured at 25% Strain.