

VGD16-24RL

EN45545-2 Compliant Silicone Sponge

Temperature Range

Silicone rubber can be expanded into silicone sponge by using blowing agents, with the resulting sponge having a fine non-interconnecting cell structure encapsulated by a soft, smooth, outer skin. Silicone sponge is an excellent sealing medium, due to its stable chemical structure and good recovery. It can be extruded into profiles and produced in sheet form. The profiles can be butt-joined or mitred to form continuous seals; the sheet can be cut into gaskets.

The "RL" range is designed for the rail industry where passenger and staff safety are paramount. In the event of a fire, the "RL" range of silicone rubber products will self-extinguish and will not release toxic fumes or high levels of smoke. Independent testing has verified that the "RL" range of silicone products meet the EN 45545-2 and UL94-V0 standards

Key Benefits

- Better sealing performance
- Lower closure force, enabling thinner and lighter substrates to be used.
- Reducing weight
- Sealing rating to IP67 possible

Material Properties

Property	VGD16RL	VGD24RL	Test Method
Density (kg/m ³)	220	550	ISO845
Hardness (Shore 00) (Shore A)	55 Approx. 12	75 Approx. 20	ASTM D 2240
Elongation at break (%)	130	310	ISO798 (sample 3mm)
Tensile Strength (MPa)	0.5	0.9	ISO798 (sample 3mm)
Compression Deflection (kPa)	40	80	ASTM 1056 (sample 12mm)
Compression Set (%)	15	10	ASTM D395
Fire Rating	UL94 V0*	UL94 V0*	UL94 V*
Limiting Oxygen Index	42.0	43.5	ISO 4589-2
Smoke Density	26.95	32.52	ISO 5659-2
Toxicity	<0.021	0.021	NFX 70-10-1 and 2

Density measured on 12mm sample. The density of samples of different sizes will be different from that stated here.

Hardness measured 12mm thick samples. At less than 12mm the measured hardness will increase with density.

Shore "A" Hardness given as guidance only, as this material is unsuitable for accurate measurement with Shore A test method

Compression Values set based on 12mm Thick Samples 22hrs @ 22hrs @ 175C

*Statement of UL94 V0 compliance is based on independent testing carried out by ITRI Ltd April 2017, Full test results are available on request. This material is not certified by UL and does not have a certificate (yellow card).

Typical values should not be used to set specification limits.

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