



401- VMQ Silicone Sponge Closed Cell

The EMI-401 range of Closed Cell Silicone Sponge is available in Extruded, moulded and Sheet form, which can be cut, joined, stripped, punched and adhesive backed, it includes a good range of densities and colours as well as a very unique Flame retardant version which has been tested and approved for use on London Underground.

Our Unique Closed Cell Silicone sponge is made up of a fine closed cellular structure encapsulated by a smooth outer skin. The material offers excellent thermal stability across a wide range of temperatures as well as excellent vibration, cushioning and damping properties. It has good resistance to UV light, Ozone, Corona and Arcing.

Closed Cell Silicone Sponge is best defined as being made from a mixed silicone gum (not liquid form, see Silicone Foam for further information) rubber base that is then heat cured. The silicone gum compound is mixed on a mill with pigment, catalyst and blowing agent added during the process. A thin calendared sheet of uncured silicone is either placed in a sheet mould or run through a continuous Hotbox to be heat cured at approximately 180°C. Secondary post-curing operations for 4 hours @ 250°C in a hot air circulating oven is often required to enhance the compression set properties and reduce the incidence of out-gassing in the final assembly.

The Silicone Sponge is normally cured on a Teflon coated fiberglass bleeder cloth to allow gasses to escape as the sponge expands during the curing process. Without the bleeder cloth, the surface would be pocked with large air pockets that would affect the sealing properties of the gasket material; instead you see the fine fabric surface finish on the cured sponge that is characteristic of closed cell silicone sponge. The finished product can provide excellent sealing properties for higher Ingress Protection (IP) applications like enclosure door seals which can be subject to wind, rain and extremes of temperature.

Generally the Gum based Silicone Sponge products offer the best overall characteristics and superior quality in comparison to that of the Liquid Silicone based foam products. So if you have a requirement that may utilise an expanded Silicone grade let us help you decide which the most suitable grade for your application is.

Properties	01-160	01-255	01-255FR	01-384	01-530
Density Kg.m ³	160	255	255	384	530
Density Lbs/ft ³	10	16	16	24	33
Tensile Strength Newtons	45	65	67	110	160
Elongation %	135	225	230	215	245
Compression Recovery					
24hrs @ 23° C = % after 1 hr	100	100	100	100	100
24hrs @ 100° C = % after 1 hr	95	95	95	95	95
72hrs @ 150 °C = % after 48 hrs	85	85	88	85	90

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