TECHNICAL

Platinum Versus Peroxide

Peroxide cured Silicones are widely used in thousands of applications and there are numerous grades to suit these demands.

However, undesirable curing by-products can cause discolouration, interference with media in contact with the Silicone and cause taint issues with potable liquids especially chlorinated water where the by-product benzoic acid reacts to create trichloro-phenols (tcp).

Platinum cured Silicones are cured with the noble Platinum atom which contains no such by-products and therefore favoured in medical, pharmaceutical and beverage machine applications.

Other advantages in using Platinum cured Silicones are their inherent higher level of transparency, excellent tear strength and a less tacky surface on extruded and moulded articles.

Extrusion profiles also exhibits a more glossy and smoother extrudate with Platinum as there is no build up on the die of Peroxide residues which can cause extrusion lines after a period of time.

Silex produce both Platinum and Peroxide grades and can advise on the most suitable choice for your specific application.

Compression Set

Usually tested in accordance to DIN 53 517 or ASTM D395 the compression set is an indication of the recovery of the Silicone and, to a limited extent, its heat resistance.

Testing is usually done at 175°C for over 22 hours, much harsher conditions than usual for organic elastomers.

Resulting figures are usually between 15 and 50% in solid Silicones although special grades can be blended to produce as low as 8-10%.

With our Silicone sponge and foam products, some of our grades exhibit exceptionally low compression set figures under 5%.