

Platinum vs Peroxide cured Silicones

15th June 2021

When we talk about platinum or peroxide curing in the silicone world, curing is when the silicone rubber is chemically cross-linked by means of the addition of a peroxide or platinum curing agent. The curing agents differ chemically to give the end product, in this case silicone, different properties.

Here we look at the positives and negatives of each system to make it clearer when deciding on what silicone material you require for your application.

Peroxide Cured Silicone

Positives

- Easier to process – needs less temperature to cure the silicone
- Once mixed, a peroxide cured silicone compound has a vastly superior shelf life so can be stored and used for longer
- Generally cheaper to buy the raw ingredients so more competitive prices
- Tried and tested systems and the industry standard

Negatives

- Sheets and tubing not as clear as platinum cured silicone. Peroxide is more translucent in appearance rather than transparent
- Needs talc or an introduction of a liner to prevent the silicone sticking to itself especially when manufacturing silicone sheeting

Platinum Cured Silicone

Positives

- Sheets and tubes are clearer so more visibility through the material
- Can be run talc free
- Generally physical properties are better especially tensile strength and tear strength
- Viewed as being the cleaner silicone out of the two which is why it is favoured in the Food, Beverage and Medical sectors

Negatives

- More expensive than peroxide which can be prohibitive if cost is an issue
- Harder to process – needs relatively high temperatures to cure
- Short shelf life – once mixed the compound has a very short shelf life and so this usually leads to waste such as head set ups being scrapped etc

At Silex and MVQ we offer both peroxide and platinum grades of silicone. However, for applications within the Food, Beverage and Medical sectors, we mostly platinum grades which are favoured in these sectors.

Overall, both curing systems produce quality silicone materials if manufactured to high standards and specifications. Both have positives and negatives and which one you choose should be in relation to the application and where the silicone will end up.

Silex Limited