



## PLATINUM'S CURATIVE BENEFITS

Speciality silicones are a growing business, and platinum's catalytic properties are key to their formulation in a process known as 'curing'

Silicones are man-made materials which come from the chemical element silicon, a major component of sand. They come in a number of forms from fluids, greases and oils to gels, resins and rubbers.

Highly versatile, silicones are said to combine the qualities of metal with the diversity of plastics. Able to lubricate, seal, bond, release, coat and insulate, they are also extremely robust, and can withstand temperature extremes and repel water.

Silicone rubber is a highly-adhesive liquid or gel. In order to convert it to a solid, it must be toughened through a process called curing, which bonds or 'cross-links' the underlying chemical structures.

Platinum is frequently used as a catalyst in the curing process, especially in the manufacture of speciality silicones, where performance characteristics such as high purity, tear-resistance, transparency and low toxicity are important.

Platinum-cured silicones are also known to be useful in processes that require detailed customisation or extreme hardness.

### Uses of platinum-cured silicone

The versatility of platinum-cured, speciality silicones means that they can be found in a wide range of products, from automotive parts, kitchenware and electronics to clothing, footwear and personal care products such as lipsticks and shampoos.

Due to their high bio-compatibility, they also have extensive medical applications and are used to make various types of tubing as well as implants and wound-healing dressings, where they have the benefit of sticking to dry skin but not the wound itself.



*Platinum-cured speciality silicone is used to make bakeware*

One major application is in release liners, commonly used for coating the backing paper of sticky labels, allowing the label to be peeled away easily without splitting.

Release liners also allow an item to be resealed or removed and stuck elsewhere, without losing stickiness. Speciality silicones feature in low-tack pressure-sensitive adhesives used to make sticky Post-it® notes.

A lesser-known use of speciality silicone is in the film industry, where it is moulded and cast to make special-effect prosthetics, like the ones seen in the Harry Potter films.

### Demand to rise

Platinum's unique combination of catalytic and physical properties see it used across many industrial processes.

Industrial applications like silicone production account for around one-fifth of total annual platinum demand.

This industrial demand segment, excluding platinum's use in automotive applications, is forecast to rise by 8 per cent in 2018, and by a further 4 per cent in 2019\*.

As one of the rarest metals in the world, platinum is also sought after across other segments such as jewellery, and it is increasingly being viewed as an investment asset.

\*World Platinum Investment Council Platinum Quarterly Q3 2018

#### Contacts:

Sally Singer, Investor Development, [ssinger@platinuminvestment.com](mailto:ssinger@platinuminvestment.com)

Brendan Clifford, Investor Development, [bclifford@platinuminvestment.com](mailto:bclifford@platinuminvestment.com)

Trevor Raymond, Research, [traymond@platinuminvestment.com](mailto:traymond@platinuminvestment.com)

Vicki Barker, Investor Communications, [vbarker@platinuminvestment.com](mailto:vbarker@platinuminvestment.com)



DISCLAIMER: The World Platinum Investment Council is not authorised by any regulatory authority to give investment advice. Nothing within this document is intended or should be construed as investment advice or offering to sell or advising to buy any securities or financial instruments and appropriate professional advice should always be sought before making any investment. More detailed information is available on the WPIC website: <http://www.platinuminvestment.com>