

Medical silicone. Picture credit: WACKER



WPIC® 60 SECONDS IN PLATINUM

## SHAPING-UP

A type of platinum-cured silicone is essential for producing safe and reliable components of all shapes and sizes, especially medical devices

Liquid silicone rubber (LSR), a type of platinum-cured silicone, is known for its flexibility, durability, and resistance to extreme temperatures. Its properties make it ideal for thousands of applications requiring a reliable, safe, and long-lasting material. Industries ranging from automotive to healthcare rely on LSR for products like seals, gaskets, and even baby bottles. Notably, given its high purity, LSR is especially suitable for medical applications, where chemical stability, safety, and non-toxicity are paramount.

Platinum catalysts are integral to the manufacture of silicones like LSR because they ensure a highly efficient and consistent curing process. For example, the chemical company WACKER uses platinum as a catalyst for the curing of crosslinking silicone release agents and for addition-curing silicone products. This efficiency translates to lower production costs and improved product quality.

The manufacturing process begins with silicone monomers — small molecules that link together to form polymers. When a platinum catalyst is mixed with the silicone monomers, it facilitates a reaction that leads to the formation of long silicone chains. This process is crucial because it determines the final properties of the LSR, including strength and flexibility.

### Medical-grade

Thanks to its purity and biocompatibility, medical demand for products made from LSR ranges from ventilation masks and handles for surgical tools to tubing for use in heart-lung machines, dialysis, respiratory equipment, and catheters. Hoses made from LSR are considered ideal for dispensing drugs and certain vaccines and it is even used to make implantable devices. Medical-grade products made with LSR can also withstand high-temperatures and frequent sterilisation.



Silicone respirator mask. Picture credit: WACKER

As demand grows for safer, more advanced healthcare technologies, platinum-catalysed LSR continues to enable innovations that ultimately improve patient care. Building on its existing portfolio of platinum-catalysed, medical-grade silicones, DuPont, a global business focused on technology-based materials, has recently introduced a range of

next-generation LSR products. The range includes materials with improved flow, lower viscosity, and greater processing efficiency, helping manufacturers produce more complex and precise medical parts, cost-effectively. These new grades also meet demanding regulatory requirements.

Contacts:

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

Brendan Clifford, Institutional Distribution, [bclifford@platinuminvestment.com](mailto:bclifford@platinuminvestment.com)

Edward Sterck, Research, [esterck@platinuminvestment.com](mailto:esterck@platinuminvestment.com)



NOTICE AND DISCLAIMER: ©2026 World Platinum Investment Council Limited. All rights reserved. The World Platinum Investment Council name and logo and WPIC are registered trademarks of World Platinum Investment Council Limited. No part of this report may be reproduced or distributed in any manner without attribution to the publisher. 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. Images are for illustrative purposes only. More detailed information is available on the WPIC website: <http://www.platinuminvestment.com>