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Plastics Technology/ Fluid technology/ Dosing and Mixing Technology/ Composite Material Technology

## OPTIMISED FOR USE IN LSR PROCESSES

### TARTLER offers special dosing and mixing systems for the Liquid Silicone Rubber process

*Moulded parts made of silicone rubber using the liquid silicone rubber (LSR) process are used in almost all areas of technology today. Their series production usually takes place in modified injection moulding and 3D printing systems. However, in order to achieve high-quality results, it is necessary to optimally condition the high- or low-viscosity components used before moulding. In its Nodopur, Nodopox and Tardosil series, the German company TARTLER therefore offers mixing and dosing systems that are perfectly tailored to the LSR requirements and can be customised.*

**Michelstadt, January 2025.** – Liquid silicone rubber technology is a widely used process for the series production of geometrically demanding and elastic moulded parts made of silicone rubber. Typical LSR components include spark plug covers (automotive), switch covers (electrical engineering) (electrical engineering), sealing rings (fluid technology) or anaesthetic masks (medical technology) - to name just a few examples. In terms of production technology, modified injection moulding and 3D printing systems determine what happens. They must be specially designed for the processing of liquid silicones, which are usually as two-component systems consisting of linear siloxanes and various fillers and additives. An important LSR process stage, which has a major influence on the trouble-free and the achievable product quality is the precise material conditioning of the liquid or paste-like liquid or pasty components before injection

moulding or 3D printing. Specially tailored to this task the German company TARTLER offers a range of products in its three established Nodopur, Nodopox and Tardosil series with special dosing and mixing systems for use in the liquid silicone rubber process. 'One of their special features is that - depending on the characteristics of the materials used - they can be equipped with our follower plate and degassing technology. Not least for this reason, they can be optimally integrated into industry- or customer-specific processes,' says Managing Director Udo Tartler.



For liquid silicone rubber applications that use low to medium viscosity materials, TARTLER offers the Nodopur dosing and mixing system. It is available as a 1-component station as standard, but can be designed for up to eight components.

### For high-viscosity LSR components

The three most important framework conditions for selecting the most suitable LSR systems from TARTLER are viscosity, homogeneity and temperature. If the materials used homogeneous and not self-levelling at room temperature, for example, they can be mixed in a Nodopox dosing and mixing system, which can be designed as a 1K or multi-component system. To regulate the mixing ratios these systems are equipped with integrated Siemens control systems, whereby all necessary PLC modules are configured by TARTLER programmers according to customer requirements and adapt them to the application. The pot life as well as the shot quantity - and in the case of volume-flow-controlled systems the mixing ratio - can be adjusted by the user on the touchscreen of the control system. If the components are available in cylindrical containers, the material feed can be optimised using with the follower plate technology. 'We also offer buffer containers that are automatically filled from refill stations as well as a number of patented vacuum options. This enables us to guarantee uninterrupted dosing and a high level of process reliability,' says Udo Tartler.



TARTLER offers the Tardosil series systems for all cases in which both high-viscosity and low-viscosity components need to be processed in liquid silicone rubber production. They can be adapted to different manufacturing processes.

### For low-viscosity materials

For LSR applications that use low to medium viscosity and self-flowing materials, TARTLER offers the Nodopur dosing and mixing system. This type of system is available as a 1-component station as standard, but can be designed for up to eight components. Here also the control is customised via a Siemens touch panel by the PLC programming by specialists of the TARTLER GROUP. If the system has volume flow control, the mixing ratio can be varied in very short cycle times; in systems without this control option, the drives receive their set-point speeds from the PLC after the system has been calibrated. In order to increase product quality and reduce waste, it is possible to refill and degass the mate-

rial components under vacuum when using a Nodopur system.



TARTLER Nodopox volumetric flow controlled dosing and mixing system with TAVA drum changing and filling station.

### Many adaptations possible

For all cases in which both high-viscosity and low-viscosity components need to be processed as part of a liquid silicone rubber production TARTLER offers the Tardosil series systems. These can also be customised and adapted to different manufacturing processes - for example via the container sizes, the feed and shot quantities, the cycle times, the degree of automation for material refilling and much more. Since LSR production in closed moulds, TARTLER also offers the option of connecting them to the system solutions, equipping them with a pressure-controlled - i.e. pressure-dependent - dosing of the volume flow. 'We recommend this especially because the components have to be continuously conveyed in exactly the right mixing ratio. Even the extreme mixing ratios for the dynamic, rotating disposable plastic mixer developed by us,' says Udo Tartler.



*„The dosing and mixing systems in our Nodopur, Nodopox and Tardosil series for use in the Tardosil series for use in the liquid silicone rubber process can also be equipped with our follower plate and degassing technology.“*

Udo Tartler, CEO

### System solutions for liquid and paste-like resins

Moulded parts made of Liquid Silicone Rubber (LSR) are very versatile due to their material properties. In addition, there is an increasing number of material types and options for combining them with different metals and plastics. Most LSR materials have hardnesses from 20 to 70 Shore A. In addition to standard types, electrically conductive variants, fluorosilicones transparent versions and many other types are currently available.

*Note for editors: Text and images are available at [www.pr-box.de](http://www.pr-box.de)!*



For more information about the TARTLER GROUP please visit our website:

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