



# SILICONIZATION

**A unique treatment process protecting and adding value to your pharmaceutical product**

# SILICONIZATION

A unique internal siliconization treatment that adds functionalities to your vial and secures your supply chain by offering unmatched quality and flexibility.

## ADVANCED PROTECTION FOR PHARMACEUTICAL PRODUCTS AND PATIENTS

Upgrade your primary glass packaging for sensitive, aggressive and viscous drug products with SGD Pharma's siliconization treatment.

A micro layer of silicone is highly bonded to the internal glass surface of the vial, acting as a barrier coating to provide dual protection: preventing ion leaching from the glass into the drug product as well as blocking drug molecules from penetrating the glass primary packaging.

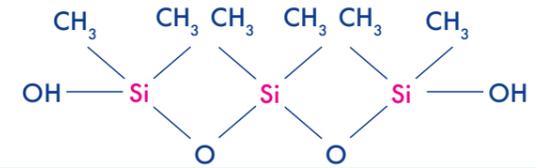
The internal coating enhances the functional performance of the glass vial while safeguarding the integrity of the sensitive therapeutic product inside.



## KEY TREATMENT BENEFITS

### Barrier effect

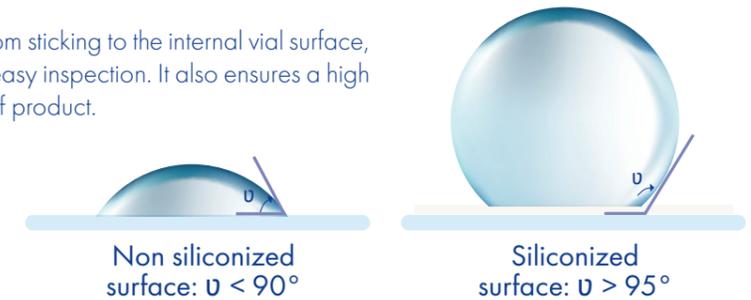
Leachables pose a toxicological and stability concern for several products, such as biological. Metal ion leachables can interact with proteins and lead to oxidation, fragmentation or aggregation. A barrier effect is created by the silicone coating which minimizes the interaction between the product and container and prevents ion leaching. The treatment improves chemical durability for alkaline solutions (> pH7) and prevents aluminium leaching.



### Hydrophobic properties

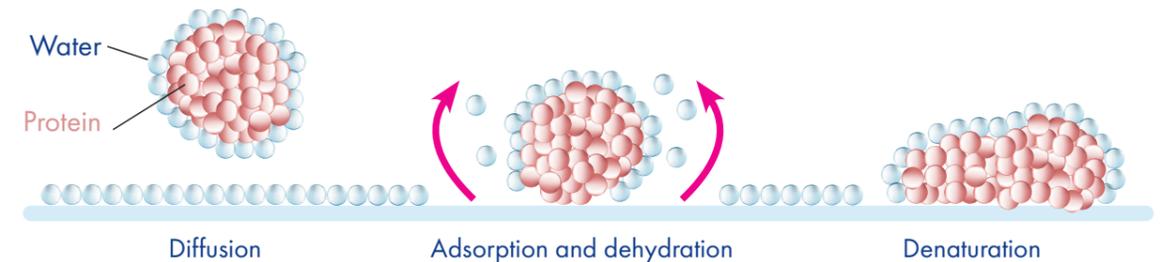
Prevention of high viscosity infusions from sticking to the internal vial surface, providing flawless transparency and easy inspection. It also ensures a high restitution rate down to the last drop of product.

Drop of water on the glass surface



### Limit protein adsorption

Results in improved dose accuracy and limits the need for over-concentration.



### Reconstituent factor

Faster dilution of powder with water for injection or other solutions.

## WHY CHOOSE US?

SGD Pharma's siliconization line is suitable for all glass types with vial sizes from 3ml to 500ml in both clear and amber glass, providing customers with a superior quality treatment and increased control of the production process, in line with SGD Pharma's high standards and the requirements of the pharmaceutical industry.

The siliconization process conforms to all pharmacopeia and undergoes stringent quality control in the GMP certified facility at our Saint-Quentin-Lamotte (SQLM) glass manufacturing plant in France. SQLM is a centre of excellence for molded glass and a green zone facility.

The treatment is ideal for a wide variety of market applications including: anti-infectives, parenteral nutrition, diagnostics, animal health and oncology to name a few.

# OPTIMIZED PROCESS, ELEVATED PERFORMANCE, ASSURED QUALITY

Powered by the latest technology, our treatment process applies the internal silicone coating to glass vials. The unique process ensures meticulous injection monitoring which reduces wastage and delivers multiple benefits, including:

**Uniform coverage of the whole surface**

**Dose repeatability**

**Precise quantities**

**Limited risk of silicone on the external surface**

## PROCESS



1

LOADING



2

PRE-WASHING  
(qualified water)



3

DRYING



4

WASHING  
(qualified water)



5

INTERNAL & EXTERNAL  
DRYING (x2)



6

SILICON  
SPRAYING



7

BAKING



8

PACKING\*



9

PALETTISATION

\* Other secondary packaging options available



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