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Less time to market



Minimizes Total

Cost of Ownership



Increased quality and safety



More flexibility



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

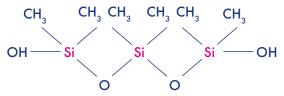


KEY TREATMENT BENEFITS

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



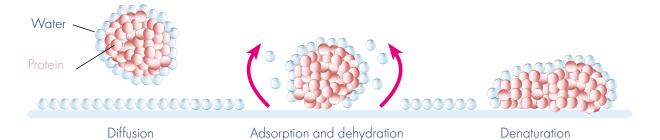
Non siliconized surface: **u** < 90°



Siliconized surface: **u** > 95°

Limit protein adsorption

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



Reconstituant factor

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

APG EUROPE & SGD PHARMA

SGD Pharma's siliconization process treats vials (3-500 ml) in clear and amber glass with the highest standards, carried out in the GMP facility in Saint-Quentin-Lamotte, France.

As a Total Packaging Management Partner, APG Europe offers top packaging for the pharmaceutical sector, reinforced by leading logistic and QA/QC support. We aim for the best packaging solutions and success for our customers.

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

OPTIMIZED PROCESS, ELEVATED PERFORMANCE, ASSURED OUALITY

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



Why APG Europe?

APG Europe is your reliable partner with a qualitatively strong total offer of the most optimal and current pharmaceutical, medical, cosmetic, perfume, OTC and food packaging enhanced by our top notch logistical solutions and QA/QC support. As a Total Packaging Management Partner, we continually strive for the search and development of high-quality packaging technologies and logistics solutions, tailored to your questions and the development of your product. Together with you, we discuss the best possible solutions and we help you to book the success you are looking for.







