

PHARMA

SGD

An extensive range
of glass bottles for
pharmaceutical industry



Glass

A reference material for pharmaceuticals

A material rich with a thousand-year history, with well-known barrier and transparency properties, glass is the reference material for pharmaceutical products.

As primary packaging of drugs, glass, more than any other material, meets the requirements of pharmaceutical industry i.e. sterilization, lyophilization...

Glass is the unmatched packaging material for delicate molecules; its barrier properties against oxygen and water provide high stability for medications without any interaction.



| SGD manufactures the 3 types of glass described by pharmacopeas | | | |
|---|--|---|--|
| Flint and amber glass | Type III | Type II | Type I |
| | soda-lime glass with a low hydrolytic resistance | soda-lime glass with a low hydrolytic surface resistance | Borosilicate glass neutral in the mass |
| SGD glass specifications | <i>Our furnaces are fully dedicated to pharmaceutical glass. No external cullet is used.</i> | <i>We are expert in inner surface treatments achieved in 2 of our facilities.</i> | <i>Asolvex® is the type I glass with the world lowest aluminum level. 2 furnaces are dedicated to type I glass production.</i> |

Research & Development

"Thanks to our industrial strength and the high standardization of our tools we offer an unmatched security of supply"

SGD : leader in glass manufacturing

In a process of continuous improvement, the R & D team of SGD Pharmacy focuses on:

- glass melting, process and analysis
- glass control stations
- improvement in pharmaceutical glass qualities

As a result of improvement in pharmaceutical glass performances, Asolvex®, the unique type I glass with a low aluminum level has been developed.



| PRODUCT | NECK FINISH | GLASS TYPE / CONTENT (ml) | | |
|---------------------|-------------|---|-----------------------------------|--|
| | | I | II | III |
| INJECTABLES | | | | |
| ISO INJECTABLE | S 20 | 5 - 7 - 8 - 10 - 24 - 30 - 50 - 100 | 7 - 8 - 50 - 100 - 250 | 7 - 8 - 10 - 15 - 24 - 30 - 50 - 100 - 250 |
| US INJECTABLE | GPI 20 | 10 - 20 - 50 - 100 - 200 | 20 - 50 | |
| LYOPHILISATION | S 20 | 5 - 10 | | 10 |
| INSULIN | S 13 | 2 - 10 | | |
| MIX-O-VIAL | SC 18 | 8 - 11,6 | | |
| DIAGNOSTICS | | | | |
| US DIAGNOSTIC | GCM1 20-400 | 5 - 8 - 15 - 40 - 70 | | |
| U-SAVE | | | | |
| U-SAVE | PH 18 | 1 - 3,5 | | |
| | FEA 20 | 3,5 - 6 - 10 | | |
| | S 20 | 3,5 | | |
| US U-SAVE | GCM1-18-415 | 3 - 5 | | |
| INFUSIONS | | | | |
| DIN INFUSION | S 32 | 50 - 100 - 250 - 300 - 500 - 500 - 1000 | 50 - 100 - 250 | |
| LIGHT WEIGTH DIN | S 32 | 500 | 250 - 500 - 1000 | |
| ISO INFUSION | S 32 | 100 - 125 - 250 - 500 | 50 - 100 - 125 - 250 - 500 - 1000 | |
| ITALIAN INFUSION | S 29 | | 100 - 250 - 500 | |
| US INFUSION | S 28 | 50 - 100 - 250 - 400 | 250 | |
| VETERINARY INFUSION | S 30 | | 250 - 500 | 250 - 500 |
| PLASMA AFNOR | Pla 40 | 125 - 250 - 500 - 1000 - 2000 | 250 - 500 - 1000 - 2000 | |
| SCANDINAVIAN PLASMA | CSB 256 | 100 - 300 - 500 - 1000 | | |



| PRODUCT | NECK FINISH | GLASS TYPE /CONTENT (ml) |
|-------------------------------|--------------|--|
| III | | |
| SYRUPS/EXTERNAL USE | | |
| ALPHA SYRUP | PP 25 | 30 - 45 - 60 |
| | PP 28 | 30 - 45 - 50 - 60 - 75 - 90 - 100 - 125 - 150 - 180 - 200 - 250 - 300 - 500 - 1000 |
| ROUND TAMPER-EVIDENT MONODOSE | PP 28 | 30 - 60 - 100 - 200 - 250 |
| EXPORT SYRUP LINE 1 | PP 28 | 15 |
| EXPORT SYRUP LINE 3 | PP 24 | 60 - 100 - 125 - 200 |
| EXPORT SYRUP LINE 4 | ALS 28-PP 28 | 100 |
| | PH 20 | 25 |
| FILLING MARK SYRUP | PP 25 | 30 - 100 - 125 |
| | PP 28 | 30/TJ15 - 45TJ30 - 90TJ60 - 100TJ50/60/75 - 125TJ50/60/70/80/100 |
| | | 150TJ120 - 250TJ200 |
| BLUE LINE | PP 36 | 90TJ60 |
| | PH 18 | 15 - 50 - 100 |
| | PH 20 | 200 |
| DROPPERS | | |
| ISO LINE | DIN 18 | 5 - 20 - 50 - 75 - 100 |
| DROPPER LINE 1 | PH 18 | 10 - 15 - 20 |
| DROPPER LINE 2 | PH 20 | 30 |
| | PP 25 | 30 - 45 - 60 |
| DROPPER LINE 3 | DIN 18 | 10 - 15 - 20 - 30 - 50 - 100 |
| MISCELLANEOUS DROPPERS | PH 13 | 2,5 |
| | DIN 18 | 15 |
| | PP 22 | 15 |
| TABLETS | | |
| HIGH SHAPE TABLET | SC 22 | 8,5 - 11,5 |
| | SC 25 | 17 |
| | SC 30 | 25 - 31 - 36 - 67 |
| LOW SHAPE TABLET | SC 30 | 18 - 45 |
| TABLET BOTTLE | R3N28 | 30 - 60 |
| ISO TAMPER-EVIDENT TABLET | SC 30 | 80 |
| | SC 32 | 40 |



DROPPER LINE 3



BLUE LINE

Quality

To meet pharmaceutical requirements

Quality is the major focus of sites manufacturing pharmaceutical bottles. Conscious that the patient is the final user of our products, SGD lives by the highest and strictest quality standards.

Quality system:

All our manufacturing sites for pharmaceuticals bottles are certified ISO 15378.

In every facility, our staff is fully committed to respecting applicable GMP to ensure the highest sustainable quality for the pharmaceutical market.

SGD is partnering with its clients to tailor quality specifications.

Our brand new corporate program based on systematic customer feedback is witness of a clear proof of the dedication of SGD team to provide the best quality level feedback of service to its pharmaceutical clients.

Product quality:

In agreement with their customers, SGD is setting up a proactive specific "quality contract" adapted to their needs and requirements.

The traceability of the production is maintained through a computerized system of all composition analysis results. Controls carried out and acceptance limits are described in our standard specifications, available in several languages.

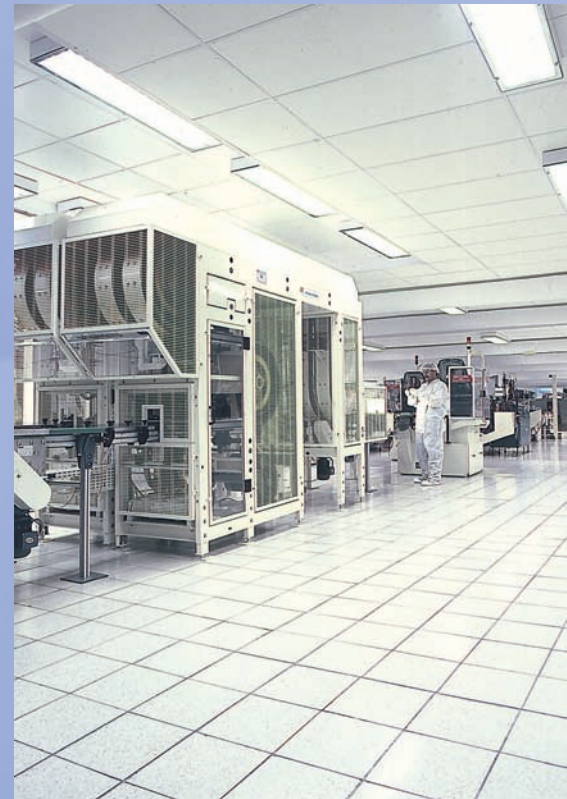
Inspection:

In all its factories, SGD developed fully automated inspection systems from the initial composition of raw material to the final packaging. On-line inspection systems check 100 % of the bottles for dimensional, functional and visual aspects.

A broad variety of physical-chemical tests are performed to validate the composition of each product batch. Additionally, for every production batch of bottles and for each type of glass, hydrolytic resistance tests are conducted to assess and validate the stability of the final product.

Regulatory support:

SGD works in collaboration with its clients providing them with all the requested documentation for quick approval and registration of their products with all the Regulatory agencies (Drug Master Files registered at the FDA and quality certificates for each delivery etc...).



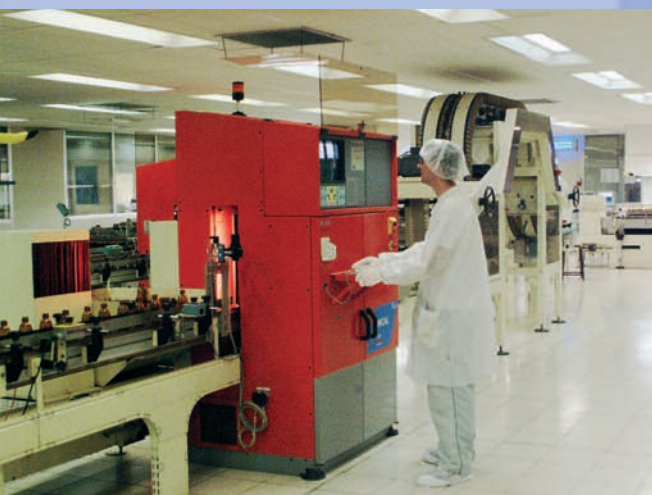
Cleanliness

A pioneer in clean process

Since 1993, SGD has been the first glass maker to be equipped with class 100,000/ISO 8 clean rooms. This performance is achieved in rooms over 10,000 sqm, after the annealing process. On-line automated inspection systems and shrink-pack packaging are performed in over-pressured and controlled air facilities.

Air locks are used for staff and material to transit. The staff is appropriately trained and dressed.

The level of particles and bacteriological quality of vials are strictly and constantly monitored.





DOME AÉROSOL



TUBE AEROSOL



CYLINDRICAL BABY FEEDIND BOTTLE



SPERE BOTTLE



TANGO JAR



VOLGA JAR



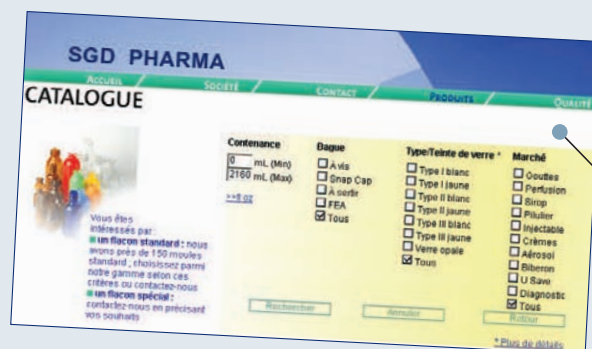
CLEOPATRE JAR

| PRODUCT | NECK FINISH | GLASS TYPE / CONTENT (ml) | |
|--|--|-------------------------------|--|
| | | I | III |
| PLASTIC COATED AEROSOLS DOME AEROSOL TUBE AEROSOL | FEA 20 FEA 20 | | 17 - 24 - 30 - 54 - 80 52 - 62 - 75 - 100 - 150 |
| CREAM JARS CLEOPATRE JAR | SPE GCM1 33-400 GCM1 40-440 GCM1 51-440 GCM1 53-440 GCM1 58-440 GCM1 66-440 GCM1 89-400 | | 5 7 15 30 50 60 125 200 |
| TANGO JAR VOLGA JAR | GCM1 40-400 SPE GCM1 33-400 GCM1 89-400 | | 40 - 50 - 100 5 - 30 - 60 15 200 |
| BABY FEEDING BOTTLES CYLINDRICAL BOTTLE SPHERE BOTTLE | SREW NECK NECK SREW NECK | 158 - 305 - 340 284 320 | |

our agents addresses and other relevant information are available on our website : www.sgd-pharma.com



home page



to consult our catalogue, select your search criteria

Creativity

New designs and security for users

Thanks to its pharmaceutical glass expertise, SGD is striving to develop new designs in every type of glass, color or quality level.

We develop our packaging solutions responding to specific needs, such as Mix o Vial[®], a bottle with a dual chamber design, or U Save[®], U-shaped bottle for a complete liquid delivery.

Standard or customized,
we propose functional and
innovative designs to add value
to your drug or healthcare
products

INNER SILICONIZATION

To add value to your product
until the last drop

The Silicone coating ensures
a higher restitution rate
down to the last drop of product.

- ▶ In order to provide the highest level of service, we offer a wide range of closures and devices.
- ▶ Moreover, we provide technical assistance to help maximize de-packing and conveying of the bottles, according to your needs..



Personnalization & Security

Trough plastic coating & printing



Plastic coating consists of a thin and protective film of plastic on the bottle; such coating is requested by EU regulations for aerosol bottles. Plastification used as protection against mechanical shocks, offers security to the user in case of breakage.

All colors and aspects like glossy, matte, frosted, clear and opaque are available.

With or without a plastic coating, our bottles can be decorated with serigraphy using UV ink, at the Verreries de la Somme, the printing plant of SGD.

So, our bottles while preserving the intrinsic qualities of glass, improve your pharmaceutical product image, highly important for OTC and generics.



pharmaceutical glass manufacturing a worldwide presence

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Sucy-en-Brie - France

3 pharmacy furnaces
type III & II - flint & amber glass



São Paulo - Brazil

1 pharmacy furnaces
type III - amber glass



Mers-les-Bains - France

2 pharmacy furnaces
type I - flint & amber glass



Kipfenberg - Germany

1 pharmacy furnaces
type III & II - flint glass



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