

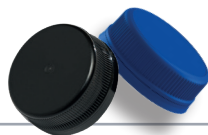
CLEAN PACKAGING STERILIZATION FOR CLEAN LABELLED PRODUCTS

Silgan's innovative closures with Pulsed light sterilization:
Product safety, line efficiency & sustainability

- **Silgan Closures**, as a leading global supplier of an extensive range of closures, designs innovative, easy-to-open and tamper-evident closures providing reliable performance.
- **Claranor Pulsed light** fits perfectly to the Silgan closures and allows significant cost savings.

► On ESL:
Savings : \$25k/year Pulsed light vs PAA treatment
(Business Case: Vilsa - Germany / 40 Mio cap/year)

► On Hot-fill (up to 185°F)
Simplification of the production line & microbiological efficiency.
The Pulsed Light Sterilization is an instant treatment. The unit is directly integrated on the cap chute & ensures 3 log reduction on thermo-resistant germs. It avoids the bottle tilting step for sterilization and allows the use of a lighter PET bottle & closure sterilization.



Silgan & Claranor

*Top quality closure & chemical-free sterilization process
the better match to protect yours products!*

CHEMICAL FREE STERILIZATION OF SILGAN CLOSURES FOR HOT FILL & ESL 120 DAYS



High product safety & line efficiency

SILGAN CLOSURES

SILGAN 38mm VSI - Plastic Closure



VSI benefits:

- Injection molded
- Two thread lead
- In-shell molded, TPE plug style liner
- Patented, drop down, «J» style tamper evident safety band



SILGAN 38mm DBJ - Plastic Closure



DBJ Benefits:

- Compression molded, high volume efficiency
- Three thread leads
- Molded, single plug seal (linerless)
- Patented, drop down, «J» style tamper evident safety band



CLARANOR PULSED LIGHT STERILIZATION

Pulsed light sterilization treatment for Hot fill & ESL 60 days

Surface of the cap to decontaminate: **internal surface**
Claranor equipment: Standard Cap - 2 lamps reflector



> 5 log reduction on *Aspergillus brasiliensis*

Pulsed light sterilization treatment for ESL 120 days

Surface of the cap to decontaminate: **internal & external surface**
Claranor equipment: FULLCAP® - 2 x 2 lamps reflector



> 5 log reduction on *Aspergillus brasiliensis*

Benefits

IMPROVE LINE-EFFICIENCY

- Compact
- Instant treatment
- High speed
- Efficiency

RESPECT PACKAGING INTEGRITY & PRODUCT QUALITY

- No chemical - sustainability
- No residue
- No neo-formed product

HIGH PRODUCT SAFETY



COMPACT



CLEANTECH



COST EFFICIENT



POWERFUL