

Important factors for a secure filling of airless tubes

The following factors influence the functionality of the airless tubes:

Viscosity, shear viscosity of the bulk and potential additives (shear viscosity – the bulk changes its viscosity depending on the flow rate/shear thinning).

Therefore, we can not make a general statement on whether a high viscous or low viscous bulk is suitable for the airless tubes. The functionality must be tested with every bulk.

Filling and sealing method

Depending on the filling and sealing method, the shape of the tube end can vary. Due to this, the amount of remaining air can vary even if the airless tube is filled at equal levels.

In order to achieve a proper functionality of the airless tube, i.e. the user needs a minimum of strokes to activate and use the pump, please note the following recommendations:

Functionality tests

Please allow min. 4 hours storage time (standing tubes) between the functionality tests and the filling of the tubes.



Airless Tube Polyfoil® Evolux



Airless Tube Polyfoil® Evoclassic

Sleeve lengths for Polyfoil® tubes

Standard values in proportion to the filling volume:

Diameter	Sleeve length	Volume
Ø25	from 60 mm	→ 15 ml
	to 142 mm	→ 50 ml
Ø30	from 92 mm	→ 40 ml
	to 148 mm	→ 75 ml

Sleeve lengths for Polyethylene tubes

Diameter	Sleeve length	Volume
Ø25	from 65 mm	→ 15 ml
	to 140 mm	→ 50 ml
Ø30	from 90 mm	→ 40 ml
	to 145 mm	→ 75 ml

Minimal length due to top-heaviness of the airless tubes:

Ø25: min. 60 mm (Polydose™, Evolux, Evoclassic)

Ø30: min. 85 mm (Polydose™, Evolux, Evoclassic)

Secure filling of airless tubes

- Reduce sleeve length by 5 mm compared to standard
- Testing tube length and filling height on your equipment
- Reduce remaining air in the tube to a minimum, without bulk contaminating the end-sealing area
- No air bubbles in the bulk

Possible failures and their reasons



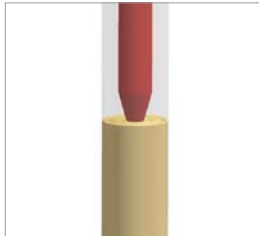
Airless Tube Polydose™

- The pump «sputters»:
 - air bubbles in the bulk
 - the bulk is very low viscous or shear viscous; the bulk formula should be checked and adapted if possible
- The pump cannot be activated within 10 strokes:
 - the filling volume is too low
 - air bubbles in the bulk
 - the viscosity of the bulk is too high

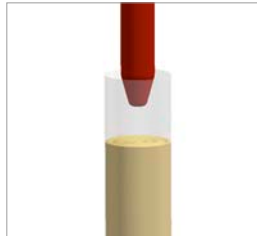
Filling process



During the filling process, the filling pipe has to be placed into the tube properly to mini-mize the air cushion under the pump.



Depending on the viscosity, the diameter of the filling pipe and the filling velocity have to be adapted in order to avoid air bubbles in the bulk.



When filling a bulk with a high viscosity, it is important to avoid a bulk peak on the upper surface of the bulk in order to achieve good welding results.

Examples



Ideal filling
Just little air remaining.
No air bubbles in the bulk.



Deficient filling
High amount of air remaining.



Deficient filling
Air bubbles in the bulk.

NEOPAC SPECIALTIES AND STANDARDS:

Polyfoil® premium protection

(Technology and Trademark from Neopac)

- Protection against light
- Diffusion-tight
- Excellent moisture and oxygen barrier
- High impermeability to organic and chemical substances
- Corrosion-resistant
- High aesthetics due to all-around printing and restoring force

Decoration possibilities

- Multi-sensory effects:
Relief | Thermochrome | Fragrance | Interference | Softtouch | Metallic
- Offset print, Silkscreen print, Hot stamping
- Highly exclusive closures:
Metal shells, metallized, hot stamped

Sustainability

- 100% UV-curing colors and lacquers
- Light weight closures
- Option: Carbon offsetting with myclimate.org
- ISO 14001 certification in 2011

Quality Standards

Clean room production: The latest production line is fully qualified in clean room ISO 8. Three further lines produce in a clean room ISO 8/9 equivalent.

We monitor for particles and microbes to certify the cleanliness of the tubes and the manufacturing environment.

Certificates

ISO 15378
ISO 9001
ISO 14001

Quality Management

Our extensive quality management system guarantees the process reliability for continuous, high-level product quality.

Services

- Tube creator: www.myneopactube.com
- Compatibility tests
- Decoration tests
- Colouring of closures and tubes
- Permeation tests (O₂; H₂O)
- Support with the tube design
- Consulting of the tube welding

Brainteam

- Tailor made developments
- Trendscouts
- Innovation workshops
- Elaborating new product concepts
- Internal idea challenges