



- Pre-washed, depyrogenated, siliconized, pre-crimped, and steam sterilized cartridges
- Ideal for a broad range of hand-held injection devices such as pens and autoinjectors
- Highly standardized, nested tub configuration to eliminate glass-to-glass contact
- Advanced baked-on siliconization process to reduce the amount of free silicone
- 3" tub and nest according to the global ISO standard 11040-7 "Prefilled syringes" and compliant with ISO 21881 "Sterile packaged ready for filling glass cartridges"

Material data

Tubing	SCHOTT FIOLAX® CHR clear Improved Borosilicate tubing glass (Type I) with Controlled Hydrolytic Resistance (CHR)	First hydrolytic class according to EP, USP and JP in its current version	
Cartridge	 1.5 ml pen cartridge OD 8.65 mm; ID* 6.85 mm; L 56.95 mm; for 8 mm crimp 3.0 ml pen cartridge OD 11.60 mm; ID* 9.7 mm; L 62.3 mm; for 8 mm crimp 5.0 ml pen cartridge OD 14.00 mm; ID* 12 mm; L 65 mm for 8 mm crimp 5.0 ml wearable cartridge OD 17.05 mm; ID* 14.25 mm; L 70 mm; for 13 mm crimp 10.0 ml wearable cartridge OD 22.05 mm; ID* 19.05 mm; L 68.70 mm; for 13 mm crimp OD = outer dimension; ID = inner dimension; L = length 	Glass Container: 80% of USP 660; EP 3.2.1; JP 7.01	
Break-Loose Force**	Pen ≤ 10 N; Test speed 100 mm/min Wearable ≤ 15 N; Test speed 100 mm/min	acc to ISO 21891 ampty cartridge	
Gliding Force**	Pen \leq 3 ml \leq 5.5 N; Test speed 100 mm/min Pen \leq 5 ml \leq 6 N; Test speed 100 mm/min Wearable \leq 10 N; Test speed 100 mm/min	acc. to ISO 21881 empty cartridge, dry, de-crimped state	
Recommend stopper & plunger combinations	 Dätwyler drug contact rubber with corresponding plunger: FM457/0 grey FirstLine™ (WEST on demand) Dätwyler Al cap: clear lacquer (WEST on demand) 	Tightness acc. to ISO 21881 Self-sealing acc. to ISO 21881 Fragmentation/coring derived from ISO 11608-3	

^{*} Best Value ID optionally available custom



^{**} acc. To recommended plungers

Sterilization

Seal & Inlay

Transport box

Nest

Tub

Bag

Sterilization method	Moist heat	ISO 17665 "Sterilization of health-care products – moist heat"
Sterility assurance level	< 10 ⁻⁶ ; Overkill approach using biological indicators	ISO 17665 "Sterilization of health-care products – moist heat"
Endotoxines	< 0.25 EU/ml	Limit values according to ISO 11040-4, USP 1231, USP 85
Documentation creation	Certificate of processing	ISO 17665 "Sterilization of health-care products – moist heat"
Documentation verification	Parametric release	ISO 17665 "Sterilization of health-care products – moist heat"

Storage and transport recommendations

- Temperature range for long term storage (more than 60 days) is defined within > 15 °C and < 30 °C
- During transport it is allowed to deviate from this requirement
- Storage shall be always above the dew point
- Avoid long term storage with exposure to sunligh
- The goods shall be stored in normal warehouse environment (no contaminants in the atmosphere) with pest control in place
- Shelf life is initially two years from date of production and certified in CoC
- Avoid mechanical stress throughout all process steps

Pitch pattern





Polymer suitable for steam sterilization

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Tyvek® – High-density polyethylene (HDPE)

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Akylux® - Corrugated polypropylene (PP)









General ordering information

Quality level	TopLine					
Packaging	Akylux® boxes with 15 nests per box Online-shop 3.0 ml Dätwyler: 6 nests for human-use applications (FHU)					
Palletizing	Standard Euro pallet (1200 x 800 mm) contains 15 boxes of 15 nests each					
Formats	1.5 ml	3.0 ml	5.0 ml	5.0 ml	10.0 ml	
Pieces per pallet	36,000	22,500	18,000	10,800	9,000	

3.0 ml configuration with combi-seal & plunger is available in small quantities as "Fast Track Article".

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