



SAFER & EASIER aseptic filling

Crystal[®] Closed Vial Technology

■ ■ ■ ■ **Vials**



The first Ready-to-fill Closed Vial.

Enables Safer and Easier aseptic filling operations.

Available from 1ml to 50ml.

Philosophy and manufacturing process:

The **Closed Vials** have been developed to cover the most used vial formats in the pharmaceutical industry with capacities of 1 - 2 - 6 - 10 - 20 - 50 ml + overfill.

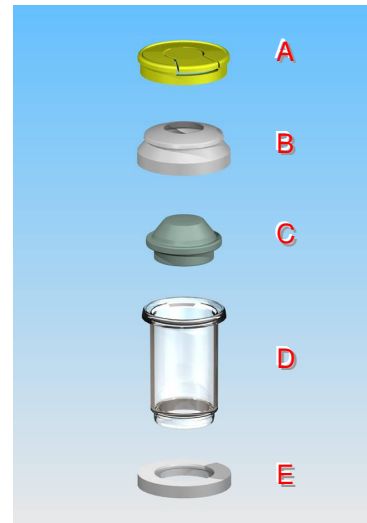
The vials' product contact materials are: COC (Cyclo-Olefin Co-polymer) for the body and a proprietary TPE (Thermo Plastic Elastomer) for the stopper, both meeting Authorities' requirements for pharmaceutical primary container.

The complete manufacturing process is made of four steps:

1. Molding of vial body and stopper followed by immediate closing by robots in a Class ISO5 clean room.
2. Final assembly and inspection of closed vial to a Class ISO8 clean room.
3. Packaging in polypropylene boxes and double wrapped in polyethylene bags or in beta-bags.
4. Sterilization by Gamma irradiation at a minimum of 25 kGray.

Vial elements:

- A. Flip-away cap
Ensures tamper evidence and sterility assurance level of the piercing area
- B. Top ring
Ensures closure integrity between stopper and vial body
- C. Stopper
Made of Thermo Plastic Elastomer
Allows laser re-sealing after filling
- D. Vial Body
Made of Cyclo-Olefin Co-polymer
Contains volume from 0.1 to 50 ml
- E. Bottom ring
Ensures mechanical stability (only for 1 and 2 ml vials)



Technical specifications:



CVFL[®] Vials	1 ml	2 ml	6 ml	10 ml	20 ml	50 ml
Height (in mm., without /with cap)	33.1/34.1	33.1/34.1	39.3/40.3	49.8/50.8	61.2/62.2	84.9/85.9
Stopper upper diameter (in mm.)	8	9	9	9	9	9
External vial diameter (in mm.)	18.3	22.3	25	25	30	36
Maximum volume filled (in ml.)	1.35	2.25	7.6	11.7	21.8	52.1
Freeze-drying	Yes, every Closed Vial format can be lyophilized*					
Oxygen-depleted	Yes, every Closed Vial format can be delivered with very low O ₂ content*					
Light-sensitive	Yes, every Closed Vial format is available with amber body					
Colored caps	Caps and rings are available in different colors for differentiation					

* Protective packaging against permeability required as for all semi-permeable containers

Aseptic Technologies S.A. reserves the right to make any changes to the described line and vial characteristics without notice.



Aseptic Technologies s.A.

www.aseptictech.com

info@aseptictech.com

+32 81 409 410

rue Camille Hubert 7

B-5032 Gembloux

BELGIUM