

# UltraShield™:

## THE FILM COATING SOLUTION FOR SAFELY STORING INNOVATIVE DRUG



State-of-the-art technology and design tailored to meet the highest demands for quality and performance



### ROBUST TO ULTRA-LOW TEMPERATURE STORAGE

An efficient solution enabling the secure storage of drugs under ultra-low temperatures up to -80°C with a broad range of crimping parameters.



### STRONG BARRIER TO AGGRESSIVE SOLVENTS

The film barrier limits drug-stopper interaction and forms an ultra-protection against aggressive excipients.



### SUPERIOR CHEMICAL COMPATIBILITY

Our ultra-clean bromobutyl rubber substrate FM457 on which is applied a fluoropolymer film that covers the complete drug contact area and forms a barrier to obtain the lowest level of extractables and leachables.

### HIGHEST QUALITY STANDARDS

UltraShield is manufactured according to Datwyler's FirstLine® concept ensuring the highest quality levels on the market.

#### UltraShield™ STOPPERS

<b>Dimension</b>	13 mm	20 mm	13 mm	20 mm
<b>Design</b>	non-blowback	non-blowback	blowback	blowback
<b>Compound</b>	FM457	FM457	FM457	FM457



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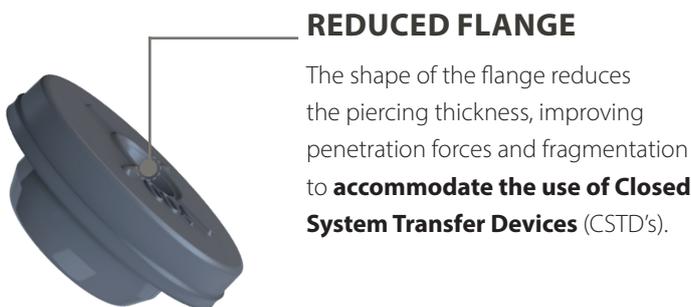
### FLUOROPOLYMER FILM

The fluoropolymer film is bonded to the plug during molding step to **drastically reduce interaction** between rubber and drug ingredients.



### LANDING AREA

The non-treated landing zone of the flange ensures **optimum sealing properties** of bare rubber.



### REDUCED FLANGE

The shape of the flange reduces the piercing thickness, improving penetration forces and fragmentation to **accommodate the use of Closed System Transfer Devices (CSTD's)**.



### CURED SILICONE

The flange is covered with silicone cured with e-beam technology to **maintain optimal machinability** while obtaining **best-in-class subvisible particle levels**. Additionally, this novel technology eliminates the need for any curing agent and therefore **contributes to the chemical performance**.

