

Bormed™ solutions for syringes



 BOREALIS

بروج
Borouge



Do you need to ramp up your syringe production to meet rising demand due to COVID-19 vaccination efforts?



In need of low dead space syringes for vaccine administration (1ml) and low volume syringes for vaccine preparation (3ml, 5ml)?

We've got you covered!

Bormed™ Concept: Dedicated service for the Healthcare Industry

COMMITMENT

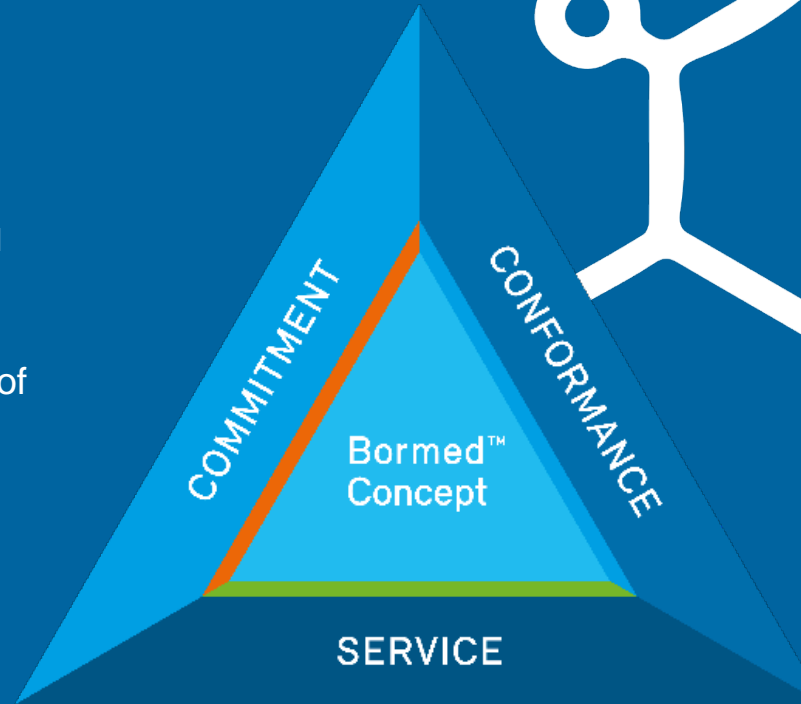
- Dedicated portfolio of branded PE & PP
- Consistency of the product recipe via rigorous change control procedure
- Continuity of supply regulated by Technical Delivery Specification
 - Product made available up to 5 years (2 years pre-notification and a last call volume combined with 3 year shelf life)
- The Bormed Directive (PO4047): operating instructions for the development, production, storage and delivery to the end customer of Bormed products

CONFORMANCE

- Pharmacopeia compliance
 - External Ph. Eur., USP (incl. 661.1) and ISO 10993 testing: analysis reports can be shared on request; DMF listing; following VDI guidelines on MGP

SERVICE

- Extractable profiles that can be shared on request
- Globally available dedicated team of experienced technical and regulatory specialists
- Innovation in products and services relevant for Healthcare industry



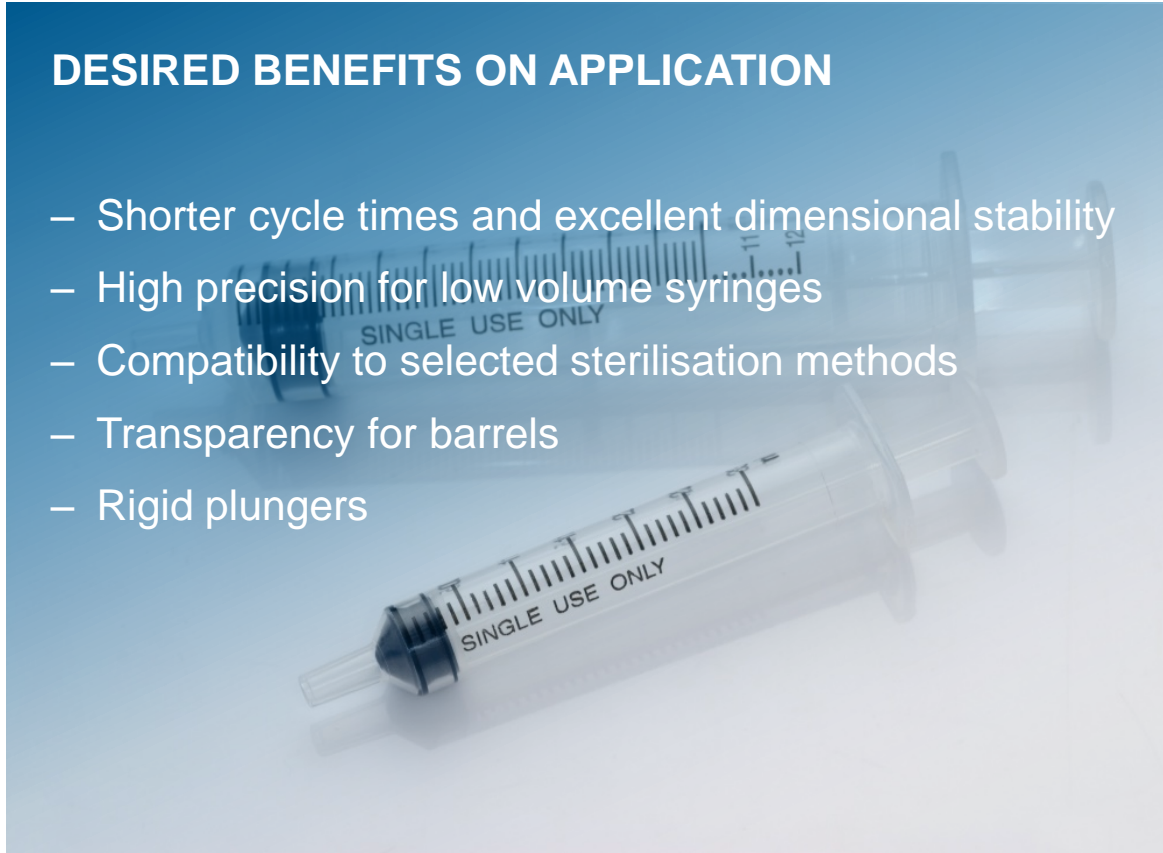
Bormed™ solutions for 3-part syringes

DESIRED BENEFITS ON APPLICATION

- Shorter cycle times and excellent dimensional stability
- High precision for low volume syringes
- Compatibility to selected sterilisation methods
- Transparency for barrels
- Rigid plungers

KEY MATERIAL REQUIREMENTS

- Faster crystallisation behaviour
- Medium to high flowability
- Good sterilisation capability
- Transparency
- High stiffness



Bormed™ solutions for 3-part syringes

Radiation Sterilisation

3-PART SYRINGES	GRADES FOR BARREL		GRADES FOR PLUNGER		
Key Performance Criteria:	HD810MO	RF830MO	HE9621PH	HD810MO	RF830MO
Stiffness	Medium	Medium	Medium	Medium	Medium
Impact Resistance	Low	Medium	High	Low	Medium
MFI (g/10dk), 230C/2,16kg	10	20	12	10	20
Transparency	Medium	High	Medium	Medium	High
Functional Additives	Nuc, Rad	Nuc, Rad	-	Nuc, Rad	Nuc, Rad

EtO / Steam Sterilisation

3-PART SYRINGES	GRADES FOR BARREL			GRADES FOR PLUNGER		
Key Performance Criteria:	RF825MO	HG820MO	HD850MO	RF825MO	HE9621PH	HD850MO
Stiffness	Medium	High	High	Medium	Medium	High
Impact Resistance	High	Low	Low	High	High	Low
MFI (g/10dk), 230C/2,16kg	20	28	8	20	12	8
Transparency	High	Medium	Medium	High	Medium	Medium
Functional Additives	Nuc	Nuc	-	Nuc	-	-



Bormed™ solutions for 2-part syringes

DESIRED BENEFITS ON APPLICATION

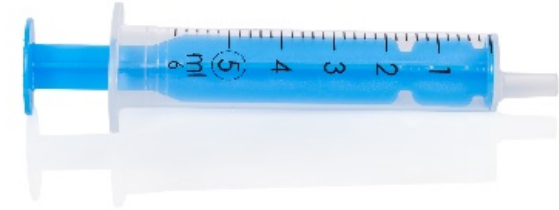
- Shorter cycle times and excellent dimensional stability
- Compatibility to selected sterilisation methods
- Transparency for barrels
- Rigid plungers
- Lower friction between barrel and plunger for better pump performance

KEY MATERIAL REQUIREMENTS

- Faster crystallisation behaviour
- Good sterilisation capability
- Transparency
- High stiffness
- Frictional compatible grades



Bormed™ solutions for 2-part syringes



Radiation Sterilisation			
2-PART SYRINGES	GRADES FOR PLUNGER		
Key Performance Criteria:	HE9621PH	HD810MO	RF830MO
Stiffness	Medium	Medium	Medium
Impact Resistance	High	Low	Medium
MFI (g/10dk), 230C/2,16kg	12	10	20
Transparency	Medium	Medium	High
Functional Additives	-	Nuc, Rad	Nuc, Rad

EtO / Steam Sterilisation			
2-PART SYRINGES	GRADES FOR BARREL		PLUNGER
Key Performance Criteria:	HF840MO	RG835MO	HE9621PH
Stiffness	Medium	Medium	Medium
Impact Resistance	Low	Medium	High
MFI (g/10dk), 230C/2,16kg	19	30	12
Transparency	Medium	High	Medium
Functional Additives	Slip	Nu, Slip	-

Do you know The Borneables™ line of Bormed™ products?

Delivering on our EverMinds™ promise to spur the transformation from a linear to a circular economy



- The Borneables are **drop-in solutions**: same technical properties, compliance statements, product safety and recyclability
- Wide range of Bormed PP homo, PP random, PP terpolymer and LDPE solutions for pharma packaging, medical and diagnostic devices available with renewable feedstock based on 2nd generation waste and residue streams with proven **lower environmental impact**
- ISCC Plus certification provides authenticity and credibility to the new mass balance approach when followed by the entire value chain and allows for credible claims on final products

Thank you

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