

Solutions for Moulding Applications



BOREALIS

SHAPING *the* FUTURE *with* PLASTICS

Borealis is a leading provider of chemical and innovative plastics solutions that create value for society. With sales of EUR 7.1 billion in 2011, customers in over 120 countries, and around 5,300 employees worldwide, Borealis is owned 64% by the International Petroleum Investment Company (IPIC) of Abu Dhabi and 36% by OMV, the leading energy group in the European growth belt. Borealis is headquartered in Vienna, Austria, and has production locations, innovation centres and customer service centres across Europe and the Americas.

Through Borouge, a joint venture between Borealis and the Abu Dhabi National Oil Company (ADNOC), one of the world's major oil and gas companies, the company's footprint reaches out to the Middle East, Asia Pacific, the Indian sub-continent and Africa. Established in 1998, Borouge employs approximately 1,700 people, has customers in more than 50 countries and its headquarters are in Abu Dhabi in the UAE and Singapore.

Building on Borealis' unique Borstar® technology and their more than 50 years experience in polyolefins, Borealis and Borouge provide innovative, value creating plastics solutions for the infrastructure (pipe systems and power and communication cables), automotive and advanced packaging markets. In addition, Borealis offers a wide range of base chemicals from melamine and fertilizer to phenol and acetone.

Today, Borealis and Borouge have a manufacturing capacity of over 5.4 million tonnes of polyolefins (polyethylene and polypropylene) per year having recently completed a 1.5 million tonne capacity expansion in Abu Dhabi. The Borouge 3 plant expansion will be completed at the end of 2013 with a further capacity of 2.5 million tonnes per year (t/y) being fully operational in mid-2014. The companies continue to invest to ensure that their customers throughout the value chain and across the globe can always rely on product quality, consistency and security of supply.

Borouge and Borealis are committed to the principles of Responsible Care® and proactively contribute to addressing the world's water and sanitation challenges through their Water for the World™ initiative.

For more information visit:

www.borealisgroup.com, www.borouge.com, www.waterfortheworld.net

Water for the World is a trademark of the Borealis group.
Borstar is a registered trademark of the Borealis group.



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Bormod™

High efficiency products with high stiffness/
impact balance.



Borpact™

High impact, high transparency products with
excellent processability.



Borclear™

Grades offering unmatched clarity and transparency
combined with high processing stability.



BorPure™

High purity grades setting new standards in organoleptic performance combined with outstanding flow properties.



Borcom™

High performance micro-composites reducing overall system cost.



Bormed™

Dedicated healthcare materials with extended service and long term commitment.

Injection moulding

Product name	MFR 230°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C/-20°C [kJ/ m ²]	Key properties
PP homopolymers				
HD120MO	8	1,500	4.0	
HE125MO	12	1,550	3.5	
HF136MO	20	1,500	3.5	CR
Bormod™ HF955MO	20	2,200	2.5	BNT
HG385MO	25	1,750	3.5	CR, BNT, AS, SA
HG313MO	30	1,500	2.5	CR, AS, NU, SA
HH315MO	35	1,650	2.5	CR, AS, NU, SA
HH450MO	37	1,650	2.0	CR
HJ325MO	50	1,650	2.0	CR, AS, NU
PP heterophasic copolymers (block copolymers)				
BC245MO	3.5	1,350	15PB/6.5	NU
BC250MO	4	1,200	25PB/7.5	NU
BC650MO	4	1,200	25PB/7.5	UV-stabilised BC250MO
BC142MO	5	1,150	9.0/4.0	CR
BD310MO	8	1,400	9.0/4.5	AS, NU
BD950MO	7	1,400	8.5/4.5	BNT, AS, SA
Bormod™ BE961MO	12	1,200	14.0/7.0	BNT, AS
BE170MO	13	1,250	8.0/4.0	
BE375MO	13	1,400	8.0/4.0	High AS, NU
BF330MO	18	1,300	7.0/4.0	CR, AS, NU
Bormod™ BF970MO	20	1,500	8.5/4.5	BNT, AS
BG373MO	30	1,550	7.5/4.0	High AS, NU
Bormod™ BG383MO	33	1,400	7.5/4.5	AS, NU
BH345MO	45	1,400	6.0/4.0	AS, NU
Bormod™ BH374MO	45	1,500	6.5/4.0	High AS, BNT
BH980MO	45	1,750	4.0/2.5	NU, SA
Bormod™ BH348MO	50	1,050	8.0/6.0	BNT, AS
Bormod™ BJ368MO	70	1,450	5.5/4.0	BNT, AS
BJ380MO	80	1,300	5.0/4.0	CR, AS, NU
BJ356MO	100	1,600	4.5/2.5	AS, NU
Bormod™ BJ998MO	100	1,400	5.0/3.0	BNT, AS
BorPure™ RJ766MO	70	1,050	5.0	AS, BNT

Applications/properties

Containers, houseware.

Houseware, packaging, closures, technical parts.

Packaging, houseware, small containers.

Houseware, cosmetic packaging, brushes, garden furniture, fast cycle.

Caps and closures, packaging, houseware, fast cycle.

Caps and closures, fast cycle.

Thin wall packaging, caps and closures, fast cycle.

Container, lids, trays, pharmaceutical and diagnostic packaging, medical application/good flow, low warpage.

Thin wall packaging, fast cycle.

Crates, boxes, luggage, technical parts, high stiffness, high impact.

Pallets, crates, boxes, luggage, technical parts, very high impact.

Pallets, crates, boxes, technical parts, very high impact.

Crates, boxes, technical parts, high impact.

Packaging, houseware, technical parts, crates.

Caps and closures, low stress whitening.

Trays, boxes, pails, very high impact, fast cycle, creep resistant.

Packaging, pails, houseware, high impact.

Pails, thin wall packaging, fast cycle.

Thin wall packaging, houseware, fast cycle.

Trays, boxes, crates, very high impact.

Pails, thin wall packaging, fast cycle, very high stiffness.

Impact copolymer with good stiffness and impact, ideal especially for pails and other articles requiring good impact.

Thin wall packaging, houseware, fast cycle.

Pails, thin wall packaging, fast cycle, very high stiffness.

Thin wall packaging, houseware, fast cycle, high gloss.

Deep freezer packaging, lids, very high impact.

Thin wall packaging, houseware, fast cycle time, high impact.

Thin wall packaging, houseware, fast cycle.

Thin wall packaging, yoghurt pots, very high stiffness, fast cycle.

High flow, high impact copolymer with excellent processability and organoleptics. Perfect for both room temperature and sub zero temperature for fat products, deserts, yogurts, ice cream etc.

New generation random copolymer with excellent organoleptics and high purity, offers high speed of crystallization with good stiffness / impact balance at high flow.

Injection moulding

Product name	MFR 230°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C/-20°C [kJ/m ²]	Key properties
PP random copolymers				
RE420MO	13	1,100	6.0	NU
RE450MO	13	1,000	8.0	AS, NU
RF365MO	20	1,150	5.5	AS, NU
RF926MO	20	1,150	6.0	AS, NU
Borclear™ RF366MO	20	1,200	5.5	NU
BorPure™ RG466MO	30	1,050	6.0	AS, BNT
BorPure™ RJ377MO	45	1,050	5.0	AS, BNT
RJ470MO	70	1,200	4.5	CR, AS, NU
RJ766MO	70	1,050	5.0	AS, BNT
RJ901MO	110	1,100	4.5	CR, AS, NU

Product name	MFR 230°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C/-20°C [kJ/m ²]	Key properties
PP random/heterophasic copolymers				
Borpact™ SG930MO	25	850	11.0/3.0	AS, NU

Product name	MFR 190°C/2.16 kg [g/10 min]	Density [kg/m ³]	Tensile modulus 1 mm/min [MPa]	Charpy impact Strength, notched 23°C/-20°C [kJ/m ²]
PE				
MG7547	4	954	950	11.0/7.0
MG9641	8	964	1,200	7.0/6.0
MG9647	8	964	1,200	7.0/6.0
MG9621	12	962	1,150	4.0/4.0
MG9601	31	960	1,050	3.0/3.0
BorPure™ MB6561	1.5	955	900	12.0/9.0
BorPure™ MB6562	1.5	955	900	12.0/9.0
BorPure™ MB7541	4	954	850	9.0/5.0

Applications/properties

Houseware, lids & closures, packaging, high impact and clarity.

Houseware, lids & closures, packaging, high impact and clarity.

Houseware, thin wall packaging, sport drinks and lightly carbonated soft drinks, very high clarity, good impact.

Transparent resin with high processability for 1-step and 2-step ISBM process.

Very high transparency grade for ISBM applications. Balance of high processing and high temperature resistance with good impact properties.

New generation random copolymer with excellent organoleptics and high purity, offers high speed of crystallization with good stiffness / impact balance.

New generation random copolymer with excellent organoleptics and high purity, offers high speed of crystallization with good stiffness / impact balance at high flow.

Thin wall packaging, houseware, very high clarity, fast cycle.

New generation random copolymer with excellent organoleptics and high purity, offers high speed of crystallization with good stiffness / impact balance at high flow.

High flow random copolymer for houseware and thin wall packaging with good transparency and fast cycle.

Applications/properties

Thin wall packaging, houseware, very high clarity and impact.

Key Properties	Applications/properties
UV	Very high impact and good flow for waste bins, fish crates, boxes. Crates, pails, houseware, high stiffness, good impact, low warpage.
UV	Crates, pails, houseware, high stiffness, good impact, low warpage. Crates, pails, houseware, high stiffness, good impact, low warpage.
	Thin walled applications, caps and closures, toys, houseware. Organoleptic multimodal grade with very good ESCR targeting sparkling and flat water and CSD.
SA	Organoleptic multimodal grade with slip agent with very good ESCR targeting CSD. Organoleptic multimodal grade with very good ESCR targeting flat water.

Thin wall packaging and houseware

Product name	MFR 230°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C/-20°C [kJ/m ²]	Key properties
PP homopolymers				
Bormod™ HF955MO	20	2,200	2.5	BNT
HH315MO	35	1,650	2.5	CR, AS, NU, SA
HJ325MO	50	1,650	2.0	CR, AS, NU
PP heterophasic copolymers (block copolymers)				
BE375MO	13	1,400	8.0/4.0	High AS, NU
BF330MO	18	1,300	7.0/4.0	CR, AS, NU
Bormod™ BF970MO	20	1,500	8.5/4.5	BNT, AS
BG373MO	30	1,550	7.5/4.0	AS, NU
Bormod™ BG383MO	33	1,400	7.5/4.5	AS, NU
BH345MO	45	1,400	6.0/4.0	AS, NU
Bormod™ BH374MO	45	1,500	6.5/4.0	High AS, BNT
BH980MO	45	1,750	4.0/2.5	NU, SA
Bormod™ BH348MO	50	1,050	8.0/6.0	BNT, AS
Bormod™ BJ368MO	70	1,450	5.5/4.0	BNT, AS
BJ380MO	80	1,300	5.0/4.0	CR, AS, NU
BJ356MO	100	1,600	4.5/2.5	AS, NU
Bormod™ BJ998MO	100	1,400	5.0/3.0	BNT, AS

Applications/properties

Very high stiffness homopolymer for fast production. High temperature strength (HDT) is excellent.

High flow homopolymer with low warpage and demoulding.

High flow homopolymer with low warpage and demoulding.

High impact and stiffness designed for pails. Excellent demoulding and antistatic properties.

High impact and stiffness with low warpage.

Very fast solidification gives possibilities for very fast cycle. High impact and stiffness.

Very fast cycle in combination with excellent drop and stacking properties.

Impact copolymer with good stiffness and impact, ideal especially for pails and other articles requiring good impact.

High impact and stiffness in combination with good flow makes this grade perfect for ice cream packaging.

New generation PP copolymer with high flow suited for thin wall pails and in multi-cavity mould systems. Very fast cycle in combination with excellent drop and stacking properties.

Very high stiffness and stacking properties of this high gloss copolymer.

Fast cycle due to high stiffness and demoulding properties.

Design for very high impact applications like 2-5 L ice cream tubs.

Fast cycle time and low warpage. Excellent for pail lids.

Fast cycle, PP with colors independent to shrinkage, unique combination of flow and impact for consumer packaging and houseware applications.

Low warpage and good mechanical properties makes this grade well suited for lids or packaging exposed to warpage. Fast cycle and good demoulding properties.

Very easy flowing copolymer which can be used for very thin wall articles or complicated designs. Perfect for many packaging projects where injection moulding and in-mould labelling is preferred in front of TF PP/PET/PE. Yoghurt pots, yellow fat, desserts, etc.

High flow, high impact copolymer with excellent processability and organoleptics. Perfect for both room temperature and sub zero temperature for fat products, deserts, yogurts, ice cream etc.

Thin wall packaging and houseware

Product name	MFR 230°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C/-20°C [kJ/m ²]	Key properties
PP random copolymers				
RF365MO	20	1,150	5.5	AS, NU
Borclear™ RF366MO	20	1,200	5.5	NU
BorPure™ RG466MO	30	1,050	6.0	AS, BNT
BorPure™ RJ766MO	70	1,050	5.0	AS, BNT
BorPure™ RJ377MO	45	1,050	5.0	AS, BNT
RJ470MO	70	1,200	4.5	CR, AS, NU
RJ901MO	110	1,100	4.5	CR, AS, NU
PP random/heterophasic copolymers				
Borpact™ SG930MO	25	850	11.0/3.0	AS, NU

Applications/properties

Stiff random with excellent transparency and good antistatic properties.

Very high transparency grade for TWP packaging.

New generation random copolymer with excellent organoleptics and high purity, offers high speed of crystallization with good stiffness / impact balance.

New generation random copolymer with excellent organoleptics and high purity, offers high speed of crystallization with good stiffness / impact balance at high flow.

New generation random copolymer with excellent organoleptics and high purity, offers high speed of crystallization with good stiffness / impact balance at high flow.

Very high fluidity random copolymer for thin walled articles and complex geometries, very high clarity and good antistatic properties.

High flow random copolymer for houseware and thin wall packaging with good transparency and fast cycle.

Thin wall packaging, houseware, very high clarity and impact.

Deep freeze packaging like ice cream.

Transport packaging

Product name	MFR 230°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C/-20°C [kJ/m ²]	Key properties	
PP heterophasic copolymers (block copolymers)					
BC245MO	3.5	1,350	15PB/6.5	NU	
BC250MO	4	1,200	25PB/7.5	NU	
BC650MO	4	1,200	25PB/7.5	NU, UV	
BC142MO	5	1,150	9.0/4.0	CR	
BD310MO	8	1,400	9.0/4.5	AS, NU	
Bormod™ BE961MO	12	1,200	14.0/7.0	BNT, AS	
BE170MO	13	1,250	8.0/4.0	—	
BE375MO	13	1,400	8.0/4.0	High AS, NU	
Bormod™ BF970MO	20	1,500	8.5/4.5	BNT, AS	
BH345MO	45	1,400	6.0/4.0	AS, NU	

Product name	MFR 190°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C/-20°C [kJ/ m ²]	Density [kg/m ³]	Key properties
PE					
MG7547	4	950	11.0/7.0	954	UV
MG9641	8	1,200	7.0/6.0	964	
MG9647	8	1,200	7.0/6.0	964	UV
MG9621	12	1,150	4.0/4.0	962	

Applications/properties

Crates, boxes, technical parts, high impact.

Crates, boxes, luggage, technical parts, very high impact, good creep resistance.

Pallets, crates, boxes, luggage, technical parts, very high impact.

Pallets, crates, boxes, technical parts, high impact.

Packaging, houseware, technical parts.

Trays, boxes, crates, very high impact, etc.

Non nucleated block copolymer with excellent impact/rigidity balance for trays, crates and boxes.

Trays, crates, boxes, pails, fast cycle.

Crates, trays, boxes, pails, fast cycle, very high stiffness.

Storage trays, houseware, fast cycle.

Applications/properties

Very high impact and good flow for waste-bins, fish-crates, boxes.

Crates, storage boxes, trays, trash containers, high stiffness, low warpage, good impact.

Crates, storage boxes, trays, trash containers, high stiffness, low warpage, good impact.

Crates, pails, houseware, high stiffness, good impact, low warpage.

Caps and closures

Product name	MFR 230°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C/-20°C [kJ/m ²]	Key properties	
PP homopolymers					
HB306MO	2	1,900	7.0	AS, BNT, SA	
HE125MO	12	1,550	3.5		
Bormod™ HF955MO	20	2,200	2.5	BNT	
HG385MO	25	1,750	3.5	BNT, AS, SA, CR	
HG430MO	25	1,400	3.5	AS, NU, SA, CR	
HG313MO	30	1,500	2.5	AS, NU, SA, CR	
HH315MO	35	1,600	2.5	AS, NU, SA, CR	
PP heterophasic copolymers (block copolymers)					
BD310MO	8	1,400	9.0/4.5	AS, NU	
BD950MO	7	1,400	8.5/4.5	BNT, AS, SA	
Bormod™ BF970MO	20	1,500	8.5/4.5	BNT, AS	
BH980MO	45	1,750	4.0/2.5	NU, SA	
PP random copolymers					
RE420MO	13	1,100	6.0	AS, NU	
RE450MO	13	1,000	8.0	AS, NU	
RF365MO	20	1,150	5.5	AS, NU	
Borclear™ RF366MO	20	1,200	5.5	NU	
PP random/heterophasic copolymers					
Borpact™ SG930MO	25	850	11.0/3.0	AS, NU	
Product name	MFR 190°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C/-20°C [kJ/m ²]	Density [kg/m ³]	Remarks
PE					
MG7547	4	950	11.0/7.0	954	UV
MG9641	8	1,200	7.0/6.0	964	
MG9621	12	1,150	4.0/4.0	962	
MG9601	31	1,050	3.0/3.0	960	High flow
BorPure™ MB6561	1.5	900	12.0/9.0	955	
BorPure™ MB6562	1.5	900	12.0/9.0	955	SA
BorPure™ MB7541	4	850	9.0/5.0	954	

Applications/properties

Low MFR for compression moulded closures, low opening torque.

High rigid non nucleated homopolymer for hinge and wide-mouth closure applications.

Fast cycle, very high stiffness.

Very good stiffness/impact balance. Fast cycle without warpage.

Excellent dimensional consistency of coloured closures.

Homopolymer specially suited for closures with integrated hinge.

Easy flowing, for closures with integrated hinge, low warpage, fast cycle.

Easy flowing, for closures with long flow path and wide-mouth closures.

For closures requiring good impact resistance at low temperatures.

Good dimensional stability and low stress whitening.

High impact, very high stiffness.

Easy flowing block copolymer allowing fast cycle time with low stress whitening, high gloss and low friction due to the incorporated lubricant.

The reduced stress whitening makes these grades very suitable for closures with integrated hinges.

Caps requiring very good organoleptics.

Excellent transparency, high flow, good anti-static properties. Very suitable for closures with integrated hinges.

Very high transparency grade for caps and closures applications (overcaps).

High impact, no stress whitening, high transparency.

Applications/properties

UN-closures and other closures requiring good ESCR.

Crates, storage boxes, trays, trash containers, high stiffness, low warpage, good impact.

Crates, pails, houseware, high stiffness, good impact, low warpage.

Very easy flowing material for closures with difficult flowpath and/or fast production rate.

Organoleptic multimodal grade with very good ESCR targeting sparkling and flat water and CSD.

Organoleptic multimodal grade with slip agent with very good ESCR targeting CSD.

Organoleptic multimodal grade with very good ESCR targeting flat water.

Bottles, containers and sheet

Product name	MFR 230°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C [kJ/m ²]	Key properties
PP heterophasic copolymers				
BA204E	0.8	1,350	24PB	
BB125MO	1.3	1,400	50PB	NU
PP random copolymers				
RB307MO	1.5	900	20PB	NU
RB206MO-06	1.9	1,150	7.0	NU
Borclear™ RC737MO	3	1,100	15	NU
Borclear™ RF366MO	20	1,200	5.5	NU

Product name	MFR 190°C/2.16 kg [g/10 min]	MFR 190°C/21.6 kg [g/10 min]	Density [kg/m ³]	Tensile Modulus 1 mm/min [MPa]	ESCR Igepal 10 % ASTM 1693 [h]
HDPE Bimodal					
BS2541	0.3	28	954	1,100	500
BS2581	0.3	28	958	1,300	100
BS4641	0.7	60	965	1,550	15
BorPure™ MB6561	1.5		955	900	180

Applications/properties

Technical BM. High heat stabilised.

Household and industrial containers.

Household and industrial containers, ISBM, cosmetics.
Very high clarity, high impact.

Mono- and multilayer bottles for food and cosmetics.
Excellent transparency, hot-fillable. High processability and plate out reduction.

Cosmetics and baby bottles, EBM. High transparency, wider processing window and better surface scratch resistance.

Very high transparency grade for ISBM applications. Balance of high processing and high temperature resistance with good impact properties.

Key properties

Applications/properties

Bimodal	Small/medium UN-containers, small/medium canisters. Small bottles, household industrial chemicals, bottles for food.
Bimodal	Small/medium canisters. Small bottles, household industrial chemicals, bottles for food.
Bimodal	Milk and dairy bottles, outstanding organoleptic and processability, cycle time reduction.
Bimodal	Organoleptic grade used for milk application for in bottle sterilisation and retort treatment.

Borimed solutions

Providing quality healthcare to the rapidly growing world population is a major global challenge. Borealis is addressing



DEDICATED MATERIALS

- Broad grade range
- Regulatory compliance [EP and USP]
- US DMF registered
- Special production and quality control [QC] precautions to provide superior product consistency, high quality and purity

SECURITY OF SUPPLY

- Long-term commitment
- Prenotification before deletion or modification
- Prioritisation in planning
- Higher stock levels
- Global supply



this challenge by delivering convenient and affordable medical materials to healthcare providers.



ADDITIONAL SUPPORT

- Regular updates [EP and USP compliance]
- Regular updates DMF files
- Long-term traceability [QC data and retained sample]
- Extended technical support
- Extensive application experience

INNOVATION

- Solutions provider
- Strong company commitment
- Pilot capabilities
- Use of the latest proprietary technologies
- Partnership with value chain



Healthcare

Product name	MFR 230°C/2.16 kg [g/10 min]	Tensile modulus 1 mm/min [MPa]	Charpy impact strength, notched 23°C [kJ/m ²]	Key properties
PP homopolymers				
Bormed™ HD850MO	8	1,800	5.5	
Bormed™ HD810MO	10	1,100	4.5	NU
Bormed™ HF840MO	19	1,250	3.5	SA
PP block copolymer				
Bormed™ BE860MO	13	1,250	8.0	
PP random copolymers				
Bormed™ RB845MO	1.9	1,000	7.0	
Bormed™ RF825MO	20	1,150	6.0	NU
Bormed™ RF830MO	20	1,150	6.0	NU
Bormed™ RG835MO	30	1,200	6.0	NU, SA

Product name	MFR 190°C/2.16 kg [g/10 min]	Density [kg/m ³]	Tensile modulus 1 mm/min [MPa]	Key properties
HDPE				
Bormed™ HE2581-PH	0.3	958	1,300	Very high ESCR
Bormed™ HE7541-PH	4	954	850	High ESCR
Bormed™ HE9621-PH	12	962	1,150	Easy processing
Bormed™ HE9601-PH	31	960	1,250	High stiffness
LDPE				
Bormed™ LE6607-PH	0.3	927	300	Steam sterilisable <110°C
Bormed™ LE6609-PH	0.3	930	350	Sterilisable > 110°C
Bormed™ LE6601-PH	1.5	922	240	Easy processing

Disclaimer The product(s) mentioned herein are not intended for use as medical implant material or implantable medical devices. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose. It is the customers' responsibility to inspect and test our products in order to satisfy themselves as to the suitability of the products for the customers' particular purpose. Customers are responsible for the appropriate, safe and legal use, processing and handling of our products.

Applications/properties

Closures, packaging, medical devices/Medium flow. High HDT.
High rigidity. Improved transparency.

Syringe, needle hubs, catheters/Medium flow. Good transparency.
Radiation up to 25 kGy.

Syringes, catheters, closures/Good flow. Low COF.

Closures, packaging, medical devices/Medium flow.
Very good impact at low temperatures.

Ampoules, bottles/Very high top load. Not sensitive to ESCR.
Good transparency. Steam sterilisation at 121°C and 20 min.

Syringes, catheters, diagnostics packaging/Good flow.
Excellent transparency. Suitable for optical read.

Syringe, catheters, blood collection systems/Good flow.
Excellent transparency. Radiation resistant up to 25 kGy.

Syringes, closures/Excellent transparency. Low COF.

Applications/properties

Bottles up to 10 l, containers/Excellent processability. Very high top load.

Closures, packaging, medical devices/Excellent processability. High ESCR

Syringe plungers, closures, packaging./Good flow and processability.
High stiffness

Syringes, closures, diagnostics packaging

Bottles up to 1l and ampoules/Pharmaceutical packaging for intravenous solutions
and medicines. Suitable for BFS machines and conventional extrusion lines.

Bottles up to 1l and ampoules/Pharmaceutical packaging for intravenous solutions
and medicines. Suitable for BFS machines and conventional extrusion lines.

Ampoules and small bottles/Pharmaceutical packaging. Suitable for BFS machines
and conventional extrusion lines.

Appliances

Product name	Filler content [%]	MFR 230°C/ 2.16 kg [g/10 min]	Tensile modulus 1 mm/1min. [MPa]	Charpy impact strength, notched 23°C [kJ/m ²]
PP homopolymers				
BE50	n.r.	0.3	1,650	7
HB600TF	n.r.	2	1,400	4
HB601WG	n.r.	2.2	1,400	5
HF700SA	n.r.	21	1,500	3.5
HG385MO	n.r.	25	1,750	3.5
PP random copolymers				
RF365MO	n.r.	20	1,150	6
PP heterophasic copolymers				
BC612WG	n.r.	5	1,100	9
Bormod™ BE961MO	n.r.	12	1,200	14
Bormod™ BF970MO	n.r.	20	1,500	8.5
BF335SA	n.r.	20	1,300	7.5
Borcom™ BG055AI	n.r.	22	2,000	4
PP microcomposite				
Borcom™ WG140AI	10	20	2,600	3.5
PP mineral filled				
MD231U	20	6	2,900	3
ME212U	20	12	2,900	2.5
MB350WG	30	2.5	2,950	4.5
MB471WG	40	2	3,800	3
MD441U	40	6	3,800	3
MD494WG	40	8	2,500	2.1
PP glass fibre reinforced				
GB205U	20	2.2	4,800	10.5
GB266WG	20	3.5	5,400	10
GB364WG/ GB366WG	30	2	6,900	12

HDT B [°C]	Key Properties	Applications
98	HS, UL	IM, BM and extrusion, parts for dishwashers
86	UL	Extrusion and thermoforming
85	HS, DR, UL	IM, BM, parts for dishwashers
94	HS, UL	IM, parts for small appliances and coffee machines
115	UL	IM, general purpose
80	UL	IM, transparent parts
70	HS, DR, UL	IM, parts for washing machines and dishwashers
92	UL, AS	IM, parts requiring high impact
105	UL	IM, parts for small appliances
95	UL	IM, parts for small appliances
108	HS, UL	IM, aesthetical parts for white goods and small appliances
120	HS, DR, UL	IM, functional parts for white goods, washing machine tubs
125	HS, UL	IM, technical parts for appliances
125	HS, UL	IM, technical parts of appliances
122	HS, DR, UL	IM, basement and interior parts for dishwasher
132	HS, DR, UL	IM, functional parts for white goods
132	HS, UL	IM, technical parts for appliances
105	HS, DR	IM, parts for white goods, washing machine tubs
154	HS, UL	IM, technical parts for appliances
159	HS, DR, UL	IM, functional parts for white goods, washing machine tubs
159	HS, DR, UL	IM, technical parts for appliances, functional parts for white goods, washing machine tubs

Facts

Polypropylene MFR

[230°C/2.16 kg] g/10 min = ISO 1133

Polyethylene MFR

[190°C/2.16 kg] g/10 min = ISO 1133

BNT = Borealis Nucleation Technology, giving highly nucleated polypropylenes with excellent dimension consistency, regardless of colour pigments, and a high potential for cycle time reduction and lightweighting.

CR = Controlled Rheology (CR) grades have a narrower molecular weight distribution resulting in reduced internal stresses and excellent dimensional stability.

SA = Slip Agent

AS = Antistatic Agent

NU = Nucleating Agent

UV = UV-stabilised

PB = Partial Break

HS = High heat stabilised

DR = Detergent resistant

UL = UL listed

Food contact regulations and certificate on pharmaceutical use

If required, contact your Borealis or Borouge representative for a certificate.

For Technical Data Sheets, Safety Data Sheets and Product Liability Statements please visit us at www.borealisgroup.com and www.borouge.com or contact your Borealis or Borouge representative.



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