

Summary Data Sheet

Solutions for Wire & Cable Communication Cables



BOREALIS

بروج

Borouge



Cost Efficiency – Reflected in Technology Development



Network Segments	Cable Type	Application	Type	Compound Name	Description	Features	
Trunk	Buried Fiber Optic	Sheath	Black	Borstar® LE8707	Bimodal LLDPE	Very low shrink back, good crush resistance (Borstar® LE8706 natural UV stabilized version).	
				Borstar® HE6062	Bimodal HDPE	High strength, very good crush resistance, good ESCR (Borstar® HE6063 natural UV stabilized version).	
				Borstar® ME6052	Bimodal MDPE	Similar properties to HE6062. Slightly more flexible and lower shrinkage (Borstar® ME6053 natural UV stabilized version).	
	Buried Fiber Optic	Buffer Tube	Natural	PP1121	High impact polypropylene heterophasic copolymer	High-speed manufacture of buffer tubes for loose tube fiber optical cables.	
	Aerial Fiber Optic	Sheath	Black	Borstar® HE6081	Bimodal HDPE	Track resistance. Suitable for ADSS cable.	
Access	Copper Multipair	Insulation	Solid	ME6032	Natural highly stabilized MDPE	High extrusion line speed, also suitable as conductor skin, containing MDA.	
				HE3366	Natural highly stabilized HDPE	Very high extrusion line speed, tough, crush resistant, also suitable as outer skin, containing MDA.	
	Copper Multipair	Insulation	Cellular	ME1254	ADCA-free natural highly stabilized MDPE containing chemical blowing agent	High extrusion line speed, suitable for expansion 30–40%, containing MDA.	
				HE1355	ADCA-free natural highly stabilized HDPE containing chemical blowing agent	Tough, high extrusion line speed, suitable for expansion 30–40%, containing MDA.	
				Sheath	Black	LE6022	Low Density Copolymer
	Borstar® LE8707	Bimodal LLDPE	Crush and abrasion resistant, high strength (LE8706 natural UV stabilized version).				
	Coax 75 Ohm (CATV, Satellite drop, OEM, ...)	Insulation	Cellular	HE1116	Low dielectric loss HDPE containing stabilizer and nucleant for gas injection	Expansion up to 70%.	
				LE6006	Stabilized low dielectric loss LDPE	High melt strength. Suitable for smaller coaxial cables.	
		Sheath	Black	Borstar® LE8707	Bimodal LLDPE	Crush and abrasion resistant, high strength (LE8706 natural UV stabilized version).	
	Fiber Optic Cables	Sheath	Black	Borstar® HE6067	Bimodal HDPE	Extra low shrink back, low extrusion temperature, good crush resistance (HE6068 natural UV stabilized version).	
Borstar® HE6069				Bimodal HDPE	Similar properties to HE6067 & HE6068 but laser printable.		
Duct		Black	Borstar® HE6062	Bimodal HDPE	High strength, very good crush resistance, good ESCR (Borstar® HE6063 natural UV stabilized version). Other products may suit particular applications. Consult Borealis.		
Building	Symmetric copper data cable (Category 5E, 6A, 7, 8)	Insulation	Solid	HE4872	Natural stabilized modified HDPE	High extrusion line speed, very adhesive. Suitable for inner and outer skin of skin-foam-skin constructions containing MDA.	
				Cellular	HE1355	ADCA-free natural highly stabilized HDPE containing chemical blowing agent	High extrusion line speed. Expansion 30–40%, containing MDA.
					HE4883	ADCA-free natural stabilized modified HDPE containing nucleant for gas injection	Suitable for physical foaming at very high line speed with fine cell structure. HE4883 is used for Category 7 and higher.
	Sheath	Flame Retardant	Casico™ FR4804	Natural LSZH Flame Retardant	Suitable for some Category 7 cables.		
			Casico™ FR4803	Natural LSZH Flame Retardant	Suitable for some Category 7 (and bigger) cables.		
Optical Fiber Data cable	Sheath	Flame Retardant	FR4810	Black LSZH Flame Retardant	Good FR and weatherability. Suitable for campus FOC & telephone cables.		

MDA – Metal deactivator
UV – Ultra-violet

ESCR – Environmental stress crack resistance
ADSS – All dielectric self-supporting

FR – Flame retardant
FOC – Fiber Optic Cable

LSZH – Low smoke zero halogen



All our grades are also available as the Borneables™, our portfolio of premium polyolefins produced with ISCC PLUS-certified renewable feedstock. These sustainable polyolefins offer the same high material performance as virgin polyolefins, yet decoupled from fossil-based feedstock and with reduced carbon emissions.

Learn more: www.borealisgroup.com/circular-economy/borneables

Solutions for Wire & Cable Communication Cables

Choosing the right insulation and sheath is crucial for producing optimal cables. Borealis has developed a range of premium solutions to meet the growing need for fiber-to-the-home (FTTH) / fiber-to-the-building (FTTB), data centers, and telecom towers. These products, along with our established options for coaxial, copper multipair (CuMP), and data cables, form Borealis' comprehensive portfolio.

- Our Borstar® technology offers outstanding jacketing solutions for communication cables, including best-in-class, low-shrink, fiber optic jackets.
- Our compounds for physical- and chemical-foamed insulation are ideal for coaxial, CuMP and data cables up to Category 8.
- Our Casico™ range offers low fire hazard (LFH) solutions.

Borstar® – Enhanced Polyethylene

The Borstar® jacketing series delivers an optimal balance of the essential properties required for communication cables, including:

- Minimal shrinkage
- Easy to process
- Excellent environmental stress crack resistance (ESCR)
- Low abrasion/hard surface
- Good barrier properties
- Ultraviolet (UV) stabilized
- Laser printability for certain grades

Chemically and Physically Foamed Insulation Compounds

Our PE cellular compounds are optimized to produce uniform and evenly distributed cells, significantly improving transmission properties. These compounds also offer enhanced flow properties, melt elasticity, and purity, enabling high production line speeds with reduced capacitance fluctuation. They are suitable for a variety of applications, including multipair telephone cables, CATV, and data cables. Chemically foamed insulation can expand by 30–40%, while physically foamed insulation might expand up to 65%.

Borealis solutions bring energy all around

Borealis has been a trusted partner to the energy industry for over 60 years, delivering innovative polyolefin solutions that help power our lives. Our portfolio includes high-performance compounds for wire and cables applications ranging from underwater power projects to transmission and distribution networks, communications, and advanced energy storage systems and capacitors.

With operations and joint ventures in the US (Baystar™ and Rockport), South Korea (DYM Solutions) and the UAE (Borouge), our reach extends well beyond Europe. This global presence widens our expertise and extends the impact of our work.

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Casico™ – Halogen-free Flame Retardant

Our proprietary Casico™ compounds are low fire hazard (LFH) solutions that offer exceptional processability. They produce minimal heat and smoke, and emit no corrosive gases, significantly reducing health and safety risks while also lowering the danger of secondary fire damage to equipment and installations. Around 20% lighter than alternative compounds, they also enable downsizing, reducing the environmental footprint.

Sustainability

Borealis has expanded its portfolio of sustainable wire & cable solutions to lead the industry in reducing our environmental footprint.

- Borcycle™ M: Fully formulated jacketing compounds that contain 50% post-consumer recycle
- The Bornewables™: Lower your carbon footprint with grades based on renewable feedstock

We understand that unique challenges require tailored solutions. Please contact our team for expert advice on customized solutions for your cable needs.

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Our purpose is to reinvent essentials for sustainable living. As part of this commitment, we're helping to accelerate electrification and the green energy transition through our proprietary technologies and advanced material solutions. These include technology platform Borlink™, sustainable engineering polymer class Stelora™, solar brand Quentys™, and Borclean™ capacitor film resins.

Meanwhile, our Borcycle™ M, Borcycle™ C and Bornewables™ portfolios are meeting demand for sustainable solutions that don't compromise on quality. Independently certified by ISCC PLUS, these high-performance compounds are the tangible result of our EverMinds™ initiative to drive progress in the transition to a circular economy.

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