

Summary Data Sheet

# Solutions for Wire & Cable Communication Cables



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# 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	Submarine Fiber Optic	Sheath	Natural	Borstar® HE6068	Bimodal HDPE	High cleanliness, extra low shrink back, low extrusion temperature, natural UV stabilized.
	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.
			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	Very flexible, long established meeting many standards, easy processing.
	Borstar® LE8707			Bimodal LLDPE	Crush and abrasion resistant, high strength (LE8706 natural UV stabilized version).	
	Borstar® LE6027			Bimodal LLDPE	Crush and abrasion resistant, high strength, more flexible than LE8707.	
	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%.
			Solid	LE6006	Stabilized low dielectric loss LDPE	High melt strength. Suitable for smaller coaxial cables.
	Fiber Optic Cables	Sheath	Black	Borstar® LE8707	Bimodal LLDPE	Crush and abrasion resistant, high strength (LE8706 natural UV stabilized version).
		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.

Table continues on the next page

MDA – Metal deactivator  
UV – Ultra-violetESCR – Environmental stress crack resistance  
ADSS – All dielectric self-supportingFR – Flame retardant  
FOC – Fiber Optic Cable

LSZH – Low smoke zero halogen

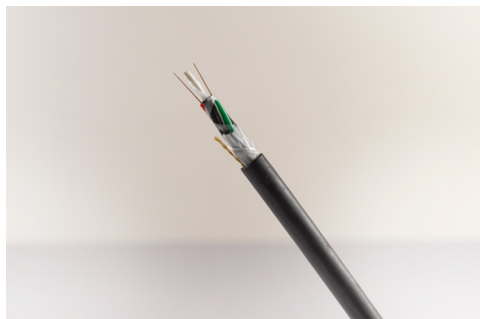
Network Segments	Cable Type	Application	Type	Compound Name	Description	Features
Building	Symmetric copper data cable (Category 5E, 6A, 7, 8)	Insulation	Solid	HE4872	Natural stabilized modified HDPE	High extrusion line speed, very adhesive Suitable for inner and outer skin of skin-foam-skin constructions 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™ FR4803	Natural LSZH Flame Retardant	Suitable for some Category 7 (and bigger) cables.

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**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](http://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%.

## 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.**

## Bibliography

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