

Solutions for Wire & Cable communication cables

Summary Data Sheet



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Cost efficiency – reflected in technology development



Network Segments	Cable Type	Application	Type	Compound Name	Description	Features
Trunk	Buried Fibre Optic	Sheath	Black	Borstar® LE8707	Bimodal LLDPE	Very low shrink back, good crush resistance (Borstar LE8706 natural UV stabilised version).
				Borstar® HE6062	Bimodal HDPE	High strength, very good crush resistance, good ESCR (Borstar HE6063 natural UV stabilised version).
				Borstar® ME6052	Bimodal MDPE	Similar HE6062. Slightly less hard and lower shrinkage (Borstar ME6053 natural UV stabilised version).
	Aerial Fibre Optic	Sheath	Black	Borstar® HE6081	Bimodal HDPE	Track resistance. Suitable for ADSS cable.
Submarine Fibre Optic	Sheath	Natural	Borstar® HE6068	Bimodal HDPE	High cleanliness, extra low shrink back, low extrusion temperature.	
Access	Copper Multipair	Insulation	Solid	ME6032	Natural highly stabilised MDPE containing MDA	High extrusion line speed, also suitable as conductor skin.
				HE3366	Natural highly stabilised HDPE containing MDA	Very high extrusion line speed, tough, crush resistant, also suitable as insulation skin.
			Cellular	ME1254	ADCA-free natural highly stabilised MDPE containing chemical blowing agent and MDA	ADCA-free very process tolerant, very high extrusion line speed, suitable for expansion 30–50%.
				HE1345	Natural highly stabilised HDPE containing chemical blowing agent and MDA	Tough, high extrusion line speed, suitable for expansion 30–40% (see HE1344 for higher expansion).
		Sheath	Black	LE6022	Low Density Copolymer	Long established meeting many standards, easy processing.
				Borstar® LE8707	Bimodal LLDPE	Crush and abrasion resistant, high strength (LE8706 natural UV stabilised version).
	Coax 50 Ohm (Mobile antenna cable)	Sheath	Black	Borstar® LE8707	Bimodal LLDPE	High strength, crush resistance and very good ESCR (LE8706 natural UV stabilised version).
				LE6027	Unimodal LLDPE	More flexible than LE8707.
	Coax 75 Ohm (CATV, Satellite drop, OEM, ...)	Insulation	Cellular	HE1106	Low dielectric loss HDPE containing stabiliser and nucleant for gas injection	Expansion up to 75%.
			Solid	LE6006	Stabilised low dielectric loss LDPE	High melt strength. Suitable for larger coaxial cables. Can also be used as a conductor or insulation skin.
	FTTX	Sheath	Black	Borstar® LE8707	Bimodal LLDPE	Crush and abrasion resistant, high strength (LE8706 natural UV stabilised version).
				Borstar® HE6067	Bimodal HDPE	Extra low shrink back, low extrusion temperature, good crush resistance (HE6068 natural UV stabilised version).
		Duct	Black	Borstar® HE6069	Bimodal HDPE	Similar properties to HE6067 & HE6068 but laser printable.
				Borstar® HE6062	Bimodal HDPE	Other products may suit particular applications. Consult Borealis.
Building	Symmetric copper data cable (Cat 5E, 6A, 7, 8)	Insulation	Solid	HE4872	Natural stabilised modified HDPE containing MDA	High extrusion line speed. Suitable for outer skin of foam-skin constructions.
			Cellular	HE1344	Natural highly stabilised HDPE containing chemical blowing agent and MDA	High extrusion line speed. Expansion 40–50% (See HE1345 for lower expansion).
				HE4883*	ADCA-free with very high line speed and fine cell structure. HE4883 is suitable for Cat 7 and higher	ADCA-free with very high line speed and fine cell structure. HE4883 is suitable for Cat 7 and higher.
	Sheath	Flame Retardant	Casico™ FR4804	Natural LSZH Flame Retardant	Meets single wire burning EN60332-1-2. Suitable for Category 7 cables.	
			Casico™ FR4803	Natural LSZH Flame Retardant	Meets single wire burning EN60332-1-2. Suitable for Category 7 (and bigger) cables.	
	Optical Fiber Data cable	Sheath	Flame Retardant	Casico™ FR4803	Natural LSZH Flame Retardant	Sheath for internal FOC & telephone cables. Suitable for campus application.
FR4810				Black LSZH Flame Retardant	Good FR and weatherability. Suitable for campus FOC & telephone cables.	

*Inner skin: ME6032
Outer skin: HE4872

MDA – Metal deactivator
UV – Ultra-violet

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

FR – Flame retardant
FOC – Fibre Optic Cable

LSZH – Low smoke zero halogen

Solutions for Wire & Cable communication cables

The selection of the correct insulation and sheath is key to producing optimum cables. To meet the growing need for FTTH/FTTB, Data Centres and Telecom Towers Borealis have developed range of top end products to meet these growing requirements. Together with old classics for Coax, CuMP and Data cables this makes up Borealis extensive portfolio.

- Our Borstar® solutions brings Jacketing for Communication cables, including leading low shrink fibre optic jacket.
- Our physical and chemical foamed insulation compounds brings Coax, CuMP and Data Cables up to Cat 8.
- Our Casico™ selection offers offers low fire hazard (LFH) solutions.

For in depth questions, always contact a local technical service engineer. Specific needs require specific solutions and Borealis has the expertise to advise on tailormade solutions for your cables.

Borstar® – Enhanced polyethylene

The Borstar jacketing product family provides an outstanding balance between all important properties for communication cables like:

- Low shrinkage
- Good processability
- Excellent ESCR
- Low abrasion/hard surface
- Good barrier properties

Chemically and physically foamed insulation compounds

Our PE cellular compounds are optimised to generate uniform and evenly distributed cells which enhance the transmission properties. In addition, improved flow properties, melt elasticity and purity allow high line speeds in combination with minimised

capacitance variations. Typical applications for the PE cellular insulation compounds include: Multipair telephone cables, CATV, and data cables. Chemical foaming insulations have expansion degrees of up to 45–50% Physically foamed insulations can reach up to 80%, e.g. the insulation typically used for large 50 ohm antenna cables.

Casico™ – Halogen-free flame retardant

Borealis offer low fire hazard (LFH) solutions which meet a number of industry standards. Our proprietary Casico™ compounds exhibit reduced heat release and smoke generation, and produce no corrosive gas emissions. These reduced hazard materials decrease the risk to health and life as well as secondary fire damage to equipment and installations. Our lower density compounds often permit downsizing thus contribute to environmental sustainability: less material is required while maintaining superior system performance.

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About Borealis Borealis is a leading provider of innovative solutions in the fields of polyolefins, base chemicals and fertilizers. With its head office in Vienna, Austria, the company currently has around 6,800 employees and operates in over 120 countries. Borealis generated EUR 8.3 billion in sales revenue and a net profit of EUR 906 million in 2018. Mubadala, through its holding company, owns 64% of the company, with the remaining 36% belonging to Austria-based OMV, an integrated, international oil and gas company. Borealis provides services and products to customers around the world in collaboration with Borouge, a joint venture with the Abu Dhabi National Oil Company (ADNOC).

Borealis and Borouge aim to proactively benefit society by taking on real societal challenges and offering real solutions. Both companies are committed to the principles of Responsible Care®, an initiative to improve safety performance within the chemical industry, and work to solve the world's water and sanitation challenges through product innovation and their Water for the World programme.

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For more information:

visit www.borealisgroup.com and www.borouge.com

Borealis AG · IZD Tower

Wagramer Strasse 17–19 · A-1220 Vienna · Austria

Tel +43 1 22 400 000 · Fax +43 1 22 400 333

Borouge Pte Ltd · Sales and Marketing Head Office

1 George Street 18–01 · Singapore 049145

