

Summary Data Sheet

# Solutions for Fiber Optic Systems – Cables and Ducts



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# Solutions for Fiber Optic Systems – Cables and Ducts



	Application	Component	Type	Grade	Material + MB*	Features
<b>Tight Buffer Unit</b>	Buffer	Outer Fiber coating	Natural	Cascio™ FR4807	LSZH Compound	Soft fiber protection, easily strippable and LSZH.
			Black	Borstar® HE6062	HDPE	High Strength, very good crush resistance, good ESCR.
			Natural	Borstar® HE6063	HDPE + color MB	Natural version of HE6062, UV stabilized.
<b>Multi Loose tube</b>	Standard Typical diameter: 8.5 mm	Jacket	Black	Borstar® HE6067	HDPE	Extra low shrink back, low extrusion temperature, good crush resistance (HE6068 natural stabilized version).
			Natural	Borstar® HE6068	HDPE + color MB	Natural version of HE6067. UV stabilized, extra low shrink, high strength.
			Black	Borstar® HE6069	HDPE	Similar properties to HE6067 & HE6068 but laser printable.
			Black	Borstar® LE8707	LLDPE	High Strength, crush resistance, good ESCR.
			Natural	Borstar® LE8706	LLDPE + color MB	Natural version of LE8707, UV stabilized.
	Mini cables Typical diameter: 6.5 mm	Jacket	Black	Borstar® ME6052	MDPE	Slightly less hard and lower shrinkage than HE6063, good processing.
			Natural	Borstar® ME6053	MDPE + color MB	Natural version of ME6052.
			Black	Borstar® HE6067	HDPE	Extra low shrink back, low extrusion temperature, good crush resistance (HE6068 natural stabilized version).
			Natural	Borstar® HE6068	HDPE + color MB	Natural version of HE6067. UV stabilized, extra low shrink, high strength.
			Black	Borstar® HE6069	HDPE	Similar properties to HE6067 & HE6068 but laser printable.
<b>Central tube</b>	Central tube	Reinforced Jacket	Black	Borstar® HE6062	HDPE	High Strength, very good crush resistance, good ESCR, UV protected.
			Natural	Borstar® HE6063	HDPE + color MB	Natural version of HE6062.
			Black	Borstar® LE8707	LLDPE	High Strength, crush resistance, good ESCR, UV protected.
			Natural	Borstar® LE8706	LLDPE + color MB	Natural version of LE8707.
			Black	Borstar® ME6052	MDPE	Slightly less hard and lower shrinkage than HE6063, good processing, UV protected.
			Natural	Borstar® ME6053	MDPE + color MB	Natural version of ME6052.
<b>Slotted core</b>	Buffer tube	Jacket	Natural	PP1121	PP	PP for buffer tubes for loose tube constructions.
		Core	Natural	PP1121	PP	PP for buffer tubes for loose tube constructions.
<b>Speciality</b>	ADSS aerial	Jacket	Black	Borstar® HE6081	HDPE	Track resistant.
	Submarine	Jacket	Natural	Borstar® HE6068	HDPE	High cleanliness, extra low shrink back, low extrusion temperature.
	LSZH	Jacket	Black	FR4810	LSZH Compound	High flame retardant for campus cables and fiber optic cables.

UV: Ultra-violet  
LSZH: Low smoke zero halogen

FR: Flame retardant  
ADSS: All dielectric self supporting

ESCR: Environmental stress crack resistance  
\*Masterbatch to be added during duct/cable production



All our grades are also available as the **Bornewables™**, 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/bornewables](http://www.borealisgroup.com/circular-economy/bornewables)

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	Application	Component	Type	Grade	Material + MB*	Features
<b>Subduct</b>	Tube Typical diameter: 16–50+ mm, Mono-Bilayer	Outer layer	Natural	BA415E	PP + UV MB	Downgauging possibilities. Optimal robustness during installation.
			Natural	BB2541	HDPE + UV MB	Easy processability. Optimal coiling.
		Inner layer	Natural	BA415E	PP + Slip MB	Mono layer option, maximize downgauging.
			Natural	BB2541	HDPE + Slip MB	Mono layer option, easy processability, Optimize coiling.
<b>Microducts</b>	Minicable Duct Typical outer diameter: 10–16 mm, Bi-Trilayer (Skin coloring)	Outer layer	Natural	BB2541	HDPE	Easy processability. Optimal coiling.
		Inner layer	Natural	BB2541	HDPE Ribbed	Easy processability. Optimal coiling.
	Fiber Unit Duct Typical outer diameter: 3–10 mm, Bi-Trilayer (Skin coloring)	Outer layer	Natural	FA3227	LDPE	Optimal coiling. Most flexible installation. UV stabilized.
			Natural	FB4230	LLDPE	Good coiling. Most flexible installation. Excellent ESCR.
		Inner layer	Natural	FA3227	LDPE	Optimal coiling. Most flexible installation. UV stabilized.
			Natural	FB4230	LLDPE	Good coiling. Most flexible installation. Excellent ESCR.

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## Fiber Optic System Solutions

Optical fiber infrastructure is now recognized as the main building block for future-proof, high-speed data transfer. Cables can be aerial, direct-buried, placed within a modular duct system, or submerged underwater. This places rigorous demands on the materials that protect the cable from external elements. Choosing the right duct, jacket, and tube is essential to produce an easy-to-install, robust and future-proof system. Borealis and Borouge offer an extensive section of globally available products tailored to meeting these needs.

This document provides a concise overview of our solutions for fiber optic systems. We recognize that each project has unique requirements, and we specialize in providing custom solutions to meet your specific needs. For detailed inquiries, please contact one of our local technical service engineers.

## Borstar® – Enhanced Polyethylene

To meet the continually evolving needs of fiber optic systems solutions, Borealis and Borouge offer a range of polyethylene and polypropylene materials based on our proprietary Borstar® bimodal technology. These materials ensure reliable performance by protecting optical fibers during cable installation underground or sub-sea, as well as throughout their operational life, delivering a combination of properties and performance levels not available with conventional PE, including:

- Thermal stability at high and low ambient temperatures
- Excellent balance of physical and water barrier properties
- Good aging performance for extended service life
- Optimal Environmental Stress Cracking Resistance
- Easy low-temperature processability with minimal shrink back

### 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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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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