AXELERON™ FO 8864 NT CPD

Colorable Medium Density Polyethylene Compound for Cable Jacketing

The Dow Chemical Company

Message:

Medium density cable sheath material
AXELERON™FO 8864 NT CPD is a high molecular weight, medium density polyethylene material, used as optical fiber and conventional metallic conductor cable sheath material. This material can be colored and has very good extrusion processing properties. AXELERON™FO 8864 NT CPD can make the cable sheath have toughness and excellent environmental stress cracking resistance. This material has anti-ultraviolet stability, which improves its resistance to direct sunlight.
as an optical fiber sheath material, AXELERON™FO 8864 NT CPD can provide excellent low-temperature optical signal attenuation performance, which is achieved by reducing the extrusion retraction stress and optimizing the low-temperature tensile modulus. A large number of application test data have shown that
specifications
AXELERON™FO 8864 NT CPD meets the following raw material specifications:
ASTM D 1248: Type II, Class A, Category 4, Grades E9 and J4
Federal LP-390C: Type II, Class M, Grade 1, Category 4

General Information			
Additive	UV stabilizer		
Uses	Fiber Optic Cable Jacketing Cable sheath Wire and cable applications Optical fiber cable		
Agency Ratings	ASTM D 1248, II, Class A, Cat. 4, Grade E9		
Forms	Particle		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	0.932	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.65	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (10% Igepal, F0)	> 500	hr	ASTM D1693
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus - 1% Secant [1]			ASTM D638
-40°C	1030	MPa	ASTM D638
-20°C	793	MPa	ASTM D638
0°C	552	MPa	ASTM D638
20°C	310	MPa	ASTM D638
40°C	206	MPa	ASTM D638
60°C	124	MPa	ASTM D638
Tensile Strength [2]	27.6	MPa	ASTM D638
Tensile Elongation [3] (Break)	900	%	ASTM D638
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature [4]			

--	< -80.0	°C	ASTM D746
--	< -60.0	°C	Internal method
CLTE - Flow [5]			ASTM D696
-40°C	1.0E-4	cm/cm/°C	ASTM D696
-20°C	1.4E-4	cm/cm/°C	ASTM D696
0°C	1.4E-4	cm/cm/°C	ASTM D696
20°C	2.0E-4	cm/cm/°C	ASTM D696
40°C	2.4E-4	cm/cm/°C	ASTM D696
60°C	2.8E-4	cm/cm/°C	ASTM D696

Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	18	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	2.40		ASTM D1531
Dissipation Factor (1 MHz)	2.0E-4		ASTM D1531

Extrusion	Nominal Value	Unit
Melt Temperature	230	°C

Extrusion instructions

AXELERON™ FO 8864 NT CPD has good extrusion processing latitude. High, stable output rates and moderate melt temperatures and pressures are obtainable with both polyethylene barrier and metering type extruder screws. Typical extrusion conditions are listed below; the exact conditions will depend upon the equipment used and the application.Extruder
Screw Type: PE Metering
Screw LD: 18:1 to 24:1
Compression Ratio: 2.5:1 to 3.0:1
Screen Pack: 20/40/60/20 mesh
Temperature Profile
Hopper: Water Cooling
Feed Zone: 300°F (150°C)
Center Zones: 440°F (225°C)
Metering Zone: 440°F (225°C)
Head: 440°F (225°C)
Die: 440°F (225°C)
Melt Temperature: 450°F (230°C)
AXELERON™ FO 8864 NT CPD cable jacketing can be applied with either pressure or sleeving (tube-on) type extrusion tooling. With tube-on extrusion, a minimum tubing tip diameter and a 2:1 drawdown ratio is recommended. If necessary, a higher drawdown ratio can be used to increase jacket tightness.

NOTE	
1.	Reduced testing speed of 0.10 in/min (2.5 mm/min) with an initial 1.50 in (38mm) jaw separation. Modulus data will vary with testing speed. Unless otherwise noted, amples are tested in accordance with ASTM D 1248, "Polyethylene Plastics Molding and Extrusion Materials."
2.	Type 4, 50mm/min
3.	Type 4, 50mm/min
4.	Notched, F20
5.	COE data generated on Dupont 942 Thermomechanical Analyzer.

infringement occurs, please contact us immediately.

Recommended distributors for this material

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