



# AXELERON™ FO 1311 NT CPD

## Overview

AXELERON™ FO 1311 NT CPD is a high-performance compound with an outstanding balance of processability and toughness. It is designed for use in Submarine fiber optical cable as well as other power and telecommunication jacketing. AXELERON™ FO 1311 NT CPD also has excellent electrical properties, superior environmental stress crack resistance and excellent UV resistance.

### Specifications

AXELERON™ FO 1311 NT CPD meets the following material specification:

- ASTM D-1248 Type III, Class A, Category 5, Grade E9

Cables jacketed with AXELERON™ FO 1311 NT CPD, using industry standard commercial extrusion practice, should meet the following cable specifications:

- IEC 60502, ST 7
- IEC 62067, ST 7
- IEC 60840, ST 7
- ICEA S-94 649
- ICEA S-108 720
- ICEA S-97 682
- ICEA-S-87-640
- IEC 60794

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density (73°F (23°C))	0.954 g/cm <sup>3</sup>	0.954 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate			ASTM D1238
190°C/2.16 kg	0.30 g/10 min	0.30 g/10 min	
190°C/21.6 kg	28 g/10 min	28 g/10 min	
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
122°F (50°C), 10% Igepal, F0	1400 hr	1400 hr	
Melt Flow Ratio - (I21/I2)	93.0	93.0	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength <sup>1</sup>	4350 psi	30.0 MPa	ASTM D638
Tensile Elongation <sup>1</sup>	750 %	750 %	ASTM D638
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Shore Hardness (Shore D)	61	61	ISO 868
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Crystallization Temperature	246 °F	119 °C	ASTM D3418
Oxidation Induction Time - in Al pan (392°F (200°C))	> 50 min	> 50 min	ASTM D3895
Aging	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Aging			IEC 60811
Retention of Tensile Elongation after 10 days : 230°F (110°C)	84 %	84 %	
Retention of Tensile Strength after 10 days : 230°F (110°C)	100 %	100 %	
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity	> 1.0E+14 ohms-cm	> 1.0E+14 ohms-cm	ASTM D1238
Additional Information	Nominal Value (English)	Nominal Value (SI)	Test Method
UV and Thermal Ageing - Retention of elongation after 1000 hrs of UV aging	> 50 %	> 50 %	ASTM G154



<b>Extrusion</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>
Melt Temperature	266 °F	130 °C

#### **Extrusion Notes**

Dow AXELERON™ FO 1311 NT CPD provides excellent surface finish at high coating speeds. For optimum results, use melt extrusion temperatures in the suggested range of 450 to 480°F (230-250°C). However, specific recommendations for processing conditions can be determined only when the application and type of processing equipment are known.

#### **Notes**

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

<sup>1</sup> Plaque molded and tested in accordance with ASTM D4976.

