AXELERON™ CS 6005 NT CPD
Low Density Polyethylene Solid Insulation Compound

Overview

AXELERON™ CS 6005 NT CPD is a high-molecular weight, density polyethylene insulation compound ("CPD") with an excellent combination of mechanical and electrical properties which make it well suited for use as a primary dielectric.

Specifications

AXELERON™ CS 6005 NT CPD meets the following raw material specifications:

- ASTM D 1248 IA-5, Grades E4 and E5
- Federal LP-390C II-L, Grade 3, Category 5
- MIL-C-17F, Amendment 1, Paragraph 3.5.2.1, Type A

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.920	g/cm³	0.920	g/cm³	ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	0.20	g/10 min	0.20	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)					ASTM D1693
100% Igepal, F20	> 96.0	hr	> 96.0	hr	
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Strength	2200	psi	15.2	MPa	ASTM D638
Tensile Elongation (Break)	600	%	600	%	ASTM D638
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Brittleness Temperature	< -130	°F	< -90.0	°C	ASTM D746
Electrical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Volume Resistivity (23°F (-5°C))	> 1.0E+16	ohms·cm	> 1.0E+16	ohms·cm	ASTM D257
Dielectric Strength					ASTM D149
0.125 in (3.18 mm), Method A (Short-Time)	550	V/mil	22	kV/mm	
Dielectric Constant (1 MHz)	2.28		2.28		ASTM D1531
Dissipation Factor (1 MHz)	2.0E-4		2.0E-4		ASTM D1531

Extrusion	Nominal Value	(English)	Nominal Value	(SI)
Melt Temperature	375 to 425	°F	191 to 218	°C

Extrusion Notes

AXELERON™ CS 6005 NT CPD provides excellent surface finish and outstanding output rates over a broad range of conditions. For optimum results, use melt extrusion temperatures in the suggested range of 375 to 425°F (191 to 218°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.

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