Dow AXELERON™ CX K-6923 NT A EXP1
High Density Polyethylene Cellular Insulation Compound

Overview

Dow AXELERON™ CX K-6923 NT A EXP1 is a high density polyethylene compound designed for use in physical foaming processes where high expansion rates (60 - 80%) are required. This compound is designed to offer excellent high speed processability as given by low extrusion pressures and smooth insulation surface quality. Furthermore, since it is fully pre-compounded with all the necessary ingredients, it offers better dispersion of the nucleating agent allowing higher expansion rates to be achieved with more consistent processability (capacitance and diameter). It is stabilized for long term cable performance with minimal impact on signal attenuation.

Applications:
Typical applications include conventional 75 Ohm CATV cables and LAN cables.

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.948	g/cm³	0.948	g/cm³	ISO 1183 [1]
Melt Mass-Flow Rate (140°C/5.0 kg)	5.6	g/10 min	5.6	g/10 min	ISO 1133
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Strength	2900	psi	20.0	MPa	IEC 60811-1-1 [2]
Tensile Elongation (Break)	1100	%	1100	%	IEC 60811-1-1 [2]
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Shore Hardness (Shore D)	64		64		ISO 868 [3]
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Oxidation Induction Time - Aluminum pan (392°F (200°C))	20	min	20	min	IEC 60811-4-2
Electrical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Dielectric Constant (2.47 GHz)	2.40		2.40		IEC 60250
Dissipation Factor (2.47 GHz)	0.00012		0.00012		IEC 60250

Extrusion	Nominal Value	(English)	Nominal Value	(SI)
Melt Temperature	338 to 374	°F	170 to 190	°C

Extrusion Notes

DGDK-6923 NT A EXP1 can be processed using a range of commercial gas injection systems.
It is normally extruded with a target melt temperature of 170 - 190 °C. Typical barrel temperatures required depend on extruder size and construction being made but a good starting point is:

- Feed zone: 140 - 150 °C
- Transition zone: 160 - 170 °C
- Injection Point: 180 - 190 °C
- Metering zone: 180 - 190 °C
- Cross head and Die: 180 - 190 °C

Notes

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

[1] On unannealed material of the melt index extrudate

[2] Measured on extruded tape

[3] Measured on compression moulded plaques