



## AXELERON™ CX 0078 NT CPD Nucleating Agent Masterbatch

### Overview

AXELERON™ CX 0078 NT CPD is a nucleating agent masterbatch for the production of gas-injected cellular insulation for use in high performance coaxial cable. Typical end-use applications for the product include 75 ohm CATV distribution and trunk coaxial cable and large diameter 50 ohm RF coaxial cable used for mobile telephony. AXELERON™ CX 0078 NT CPD contains 10% of a low loss nucleating agent in a HP LDPE base resin. The masterbatch must be dry-blended with HDPE and LDPE base compounds ("CPD"), AXELERON™ CX 6944 NT CPD HDPE and AXELERON™ CX 1253 NT CPD LDPE respectively, prior to gas injection. For optimal foaming and cell structure, the nucleating agent concentration should range from 0.1-0.3% or 1-3% masterbatch in the blend. Since the compound exhibits excellent electrical properties, it is especially well suited to the production of heavy-wall (>7 mm insulation) foamed insulation. It is designed to offer superior processability and ease of foaming, allowing expansion rates of up to 80% to be achieved.

### Additive

- Nucleating Agent

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.970 g/cm <sup>3</sup>	0.970 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate <sup>1</sup> (190°C/2.16 kg)	2.0 g/10 min	2.0 g/10 min	ASTM D1238

### Extrusion Notes

AXELERON™ CX 0078 NT CPD is designed to be extruded with Dow's gas injection compounds AXELERON™ CX 6944 NT CPD HDPE and AXELERON™ CX 1253 NT CPD LDPE. It is normally added at 1-3 % masterbatch concentration into a blend of 60-80% 6944 and 20-40% 1253.

While the exact temperature profile required will depend upon the screw design and construction being made, the following extrusion temperature profile represents a good starting point:

- Feed Zone: 285-300°F (140-150°C)
- Transition Zone: 340-355°F (170-180°C)
- Gas Injection Point: 355-410°F (190-210°C)
- Metering Zone: 285-340°F (140-170°C); depends on diameter insulation
- Crosshead and Die: 265-320°F (130-160°C); depends on diameter insulation

### 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> Base Resin

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