

# AXELERON™ CX 0078 NT CPD

Nucleating Agent Masterbatch

The Dow Chemical Company

## Message:

AXELERON™CX A- 0078 NT is a nucleating agent used for gas injection cell insulation used in high-performance coaxial cables. Typical end applications include 75 ohm CATV distribution cables and trunk coaxial cables, or thicker 50 ohm RF coaxial cables for mobile phone technology. AXELERON™CX A- 0078 NT uses HP LDPE as the base resin, to which a 10% nucleating agent with low loss is added. Before gas injection, the masterbatch must be combined with HDPE, LDPE material and AXELERON™CX 6944 NT CPD HDPE, AXELERON™CX 1253 NT CPD LDPE were dry mixed separately. In order to optimize the foaming and cell structure, the nucleating agent content should be 0.1-0.3%, that is to say, the masterbatch content in the blend should be 1-3%. Due to the excellent electrical properties of this material, it is particularly suitable for manufacturing thick-walled (>7mm insulating material) foamed insulating materials. It can also endow the product with excellent processing performance, easy foaming, and foaming rate up to 80%.

General Information			
Additive	Nucleating agent		
Uses	Coaxial Cable Insulation		
	Wire and cable applications		
	Masterbatch		
	Foam		
Forms	Particle		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.970	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) <sup>1</sup> (190°C/2.16 kg)	2.0	g/10 min	ASTM D1238
Extrusion instructions			
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			
NOTE			
1.	Base Resin		

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