

Technical Information



DOW™ Wire & Cable DFNK-0012 NT Nucleating Agent Masterbatch

Overview

DOW™ Wire & Cable DFNK-0012 NT is a masterbatch for use as a nucleating agent in gas injection applications. It is specially designed for easy incorporation into HDPE and LDPE. When used correctly, it allows the formation of small, uniformly distributed cells. The masterbatch is a 2% concentrate of an exothermic chemical blowing agent in a high pressure LDPE base resin. It should be used at 0.5-3% masterbatch concentration.

DFNK-0012 NT contains a stabilizer protecting against thermal oxidation and catalytic degradation by copper.

Applications:

Typical applications include RF cable and CATV drop cable with expansion rates of up to 80 %.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.928 g/cm ³	0.928 g/cm ³	ISO 1183
Melt Mass-Flow Rate ¹ (140°C/2.16 kg)	1.7 g/10 min	1.7 g/10 min	ISO 1133

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

Extrusion Notes

Dow Wire & Cable DFNK-0012 NT Polyethylene Masterbatch is designed to be extruded with Dow AXELERON™ CX 6944 NT CPD and Dow AXELERON™ CX 1258 NT CPD from Dow. It is normally added at 0.5 - 3 % masterbatch concentration into a blend of 60 - 80 % AXELERON CX 6944 NT CPD and 20 - 40 % AXELERON™ CX 1258 NT CPD. It is normally extruded with a target melt temperature of 170 - 190 °C. Typical extruder barrel temperatures required depend on the extruder size and construction being made but a good starting point is:

- Feed zone: 140 -150 °C
- Transition zone: 160 -170 °C
- Injection point: 185 -200 °C
- Metering zone: 160 -190 °C
- Crosshead and Die: 160 -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 Measured on MFR cut-off without annealing.



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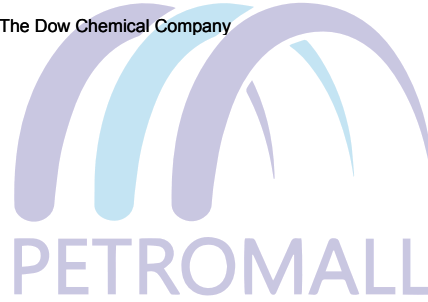
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