



BPD4035

Product Technical Information

BPD4035 is a black medium density polyethylene compound designed for cable jacketing. It contains 2.3% of a well dispersed carbon black and an antioxidant package leading to a complete outdoor weatherability and excellent ageing properties.

BPD4035 is based on a polymer which offers an excellent resistance to environmental stress cracking, good low temperature properties, and an excellent extrudability.

The polymer density has been chosen near the upper limit of MDPE in order to retain maximum mechanical properties, and resistance to heat deformation.

Specification

BPD4035 meets the following material specification:

- ISO 1872 - PE KLC 40 D 003
- ASTM D 1248 - Type II, Class C, Cat 5, Grade W6

Regulations and approvals

Cables jacketed with BPD4035 according to standard technology comply with the following cable specifications:

- IEC 708 • IEC 840 Class ST 3 & ST 4
- IEC 60502 - 1/2 Class ST 3 & ST 7 • REA PE 38
- BT M 132 • REA 200 Appendix F
- CNET CM 24 (PEMD) • BS 6234

Packaging

BPD4035 is sold in pellet form and is available in the following packages: 1.1 ton holbins or bulk tankers.

Processing Data

The good processing characteristics of BPD4035 allow a wide range of both equipment and process conditions. Normally the extruder barrel temperatures should be set to give a resulting melt temperature in the range of 210-230°C. Processing above 230°C should be avoided to prevent heat degradation.

BPD4035 in its original packaging is ready for use. Extreme temperature changes and a high percentage of atmospheric humidity can lead to condensation within the packaging. Pre-drying of the material is advisable in this case.

On a commercial line 150mm - 20 L/D a typical temperature profile would be: Barrel: 180 - 190 - 200 - 200°C Head: 210°C Die: 210°C



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Properties		Test Method	Value ⁽¹⁾	Units
Physical				
Melt flow rate	190°C, 5kg	ISO 1133 Cond. D	0.85	g/10min
Melt flow rate	190°C, 2.16kg	ISO 1133 Cond. D	0.20	g/10min
Conventional density		ISO 1183 Method D	949	kg/m ³
conditioning ISO 1872/1				
Tensile strength	@ yield	IEC 811-1-1 ⁽²⁾	18	MPa
Tensile strength	@ break	IEC 811-1-1 ⁽²⁾	34	MPa
Elongation	@ break	IEC 811-1-1 ⁽²⁾	>600	%
Vicat softening point	VST/A	ISO 306	116	°C
Low temperature brittleness		ISO 974	-76	°C
Carbon black content		IEC 911-4-1	2.3	%
Shore D hardness		ISO 868 (1 sec)	60	-
ESCR 10% "Igepal" F ₀		IEC 811-4-1	>1000	h
Retention of mechanical properties after ageing in oven 10 days @ 100°C		IEC 811-1-2 ⁽²⁾	>75	%
Heat deformation resistance (6 hours @ 115°C)		IEC 811-3-1	<50	%
Electrical				
Volume resistivity		ASTM D 257	>10 ¹³	Ω m
Dielectric constant	@ 1 MHz	ASTM D 1531	2.6	-

(1) Data should not be used for specification work

(2) Measured on plaques prepared according to INEOS O&P Europe STP 002