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.

Benefits & Features

- Very good processability
- High stress cracking resistance
- Excellent quality controlled organoleptic properties
- Grade containing a Slip Agent ensuring easy cap application and opening.

Applications

It is especially suited for applications requiring excellent stress cracking resistance and enhanced processability. Thanks to high purity and excellent organoleptic properties it is well suited for packaging in direct contact with beverages and sensitive food.

- Injection Moulding and Compression Moulding of Caps & Closures for the packaging of sparkling water and carbonated soft drinks; especially in reduced weight cap designs
- Injection Moulding of thin wall packaging, especially for the food industry

Properties	Conditions	Test Methods	Values	Units
Rheological				
Melt Flow Rate	190°C/5kg	ISO 1133-1	0.85	g/10min
Melt Flow Rate	190°C/2.16kg	ISO 1133-1	0.20	g/10min
Physical				
Density ISO 17855-1	23°C	ISO 1183-1	949	kg/m³
Mechanical				
Brittleness temperature		ISO 974	-76	°C
Elongation at Break		IEC 60811-501	>600	%
Heat deformation resistance	6 hours at 115°C	IEC 60811-508 ; IEC 60811-509	<50	%
Retention of mechanical properties after ageing	in oven 10 days at 100°C	IEC 60811-401	>75	%
Shore D hardness, 1 s		ISO 868	63	-
Shore D hardness, 3 s		ISO 868	61	-
Tensile Strength at Break		IEC 60811-501	34	MPa
Tensile Strength at yield		IEC 60811-501	18	MPa
Vicat softening temperature	Method A (10N)	ISO 306	116	°C
Environmental Stress Cracking Resistance (BTT)	F0, 10 % Igepal	IEC 60811-406	>1000	h
Electrical				
DC volume resistivity		ASTM D257	>1013	ohm. m
Dielectric constant	1 MHz	ASTM D150	2.6	-

Data should not be used for specification work

January, 2025

Published by

INEOS Olefins & Polymers Europe

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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

Storage

The product should be stored in a dry and dust free environment at temperature below 50°C. Exposure to direct sunlight should be avoided as this may lead to product deterioration.
It is advised to process the product within maximum one year after delivery.

Regulatory Information

The product and uses described herein may be subject to specific requirements or limitations for use in certain applications like food contact, drinking water or medical devices. Further information may be obtained from the website www.ineos.com where a specific Regulatory Certificate is available for each grade under the heading "SDS & Regulatory Certificate".

Unless specifically indicated, the product mentioned herein is not suitable for applications in the medical or pharmaceutical sectors.

Health and Safety Information

The product described herein may require precautions in handling. The available product health and safety information for this material is contained in the Safety Data Sheet (SDS) that may be obtained from the website www.ineos.com. Before using any material, a customer is advised to consult the SDS for the product under consideration for use.

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