BP28D780

Product Technical Information

BP28D780 is a low density polyethylene compound suitable for the thin walled insulation of telephone wires.

Benefits & Features

BP28D780 combines good processability at very high extrusion speeds with excellent mechanical properties, a high resistance to copper catalysed thermal oxidation and excellent resistance to petroleum jelly absorption. The combination of these properties in **BP28D780** makes it suitable for use as telephone singles insulation in air spaced and filled cables and in environments subject to high temperatures. **BP28D780** contains a metal deactivator.

Properties	Conditions	Test Methods	Values	Units
Rheological				
Melt Flow Rate	190°C/2.16kg	ISO 1133-1	0.3	g/10min
Physical				
Density ISO 17855-1	23°C	ISO 1183-1	926	kg/m³
Mechanical				
Tensile Strength at Yield		IEC 811-1-1(1)	15	MPa
Tensile Strength at Break		IEC 811-1-1(1)	18	MPa
Elongation at Break		IEC 811-1-1(1)	550	%
Electrical				
Dielectric constant	1 Hz	ASTM D 1531	2.28	
Dissipation factor	1 Hz	ASTM D 1531	100	µrad
Thermal				
Shore D hardness	1 sec	ISO 868	56	
Vicat Softening point	VST/A	ISO 306	106	°C
Insulation(5)				
Tensile Strength at Break		IEC 811-1-1	20	MPa
Elongation at Break		IEC 811-1-1	600	%
Retention of tensile properties	Ageing in air (10 days, 100°C)	IEC 811-1-2	90	%
Weight gain	Petroleum Jelly Absorption(2)	IEC 811-4-2	11	%
Retention of tensile properties	Petroleum Jelly Absorption(2)	IEC 811-1-1	90	%
Resistance to ageing in air	105°C(3)	BT M237, IEC 811-4-2	1500	h

Data should not be used for specification work

(1) Measured on plaques prepared according to STP 002

(2) Preconditioned in Petroleum Jelly (10 days, 70°C)

(3) Preconditioned in Petroleum Jelly (14 days, 70°C)

(4) Tests carried out on insulation of 0.2 mm radial thickness on 0.5 mm diameter copper conductors

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Specification

BP28D780 meets the following material specification:

- ISO 1872-PE, K HKN, 27-D003
- ASTM D 1248: Type II, Class A, Cat 5, Grade E4, D5
- VDE 0819, Part 103, L/MD Solid
- EN 50290-2-23

Compliance to Regulations

Telephone cables insulated with **BP28D780** according to standard technology comply with the following industry cable specifications:

- IEC 60364-7-708
- BT M 237B
- CNET CM 24

Packaging

BP28D780 is sold in pellet form and is available in the following packages: 25 kg bags, 1.1 ton holbins or bulk tankers.

Processing guidelines

BP28D780 can be easily processed on all commercial single screw extruders which are designed for extrusion of high molecular weight, low density polyethylene. Screws with a L/D ratio >20:1 and a compression ratio >3 are best suited.
Normally the extruder barrel temperatures should be set to give a resulting melt temperature in the range 210-280°C depending on various parameters, such as the thickness of the insulation layer, geometry of the die, cross section of the conductor and drawing-off speed.

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.

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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.

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