



BP28D780

Product Technical Information

BP28D780 is a low density polyethylene compound suitable for the thin walled insulation of telephone wires. 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. BP 28 D780 contains a metal deactivator.

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
- BS 6234, Type 03
- VDE 0207, Part 2, Type 2Y12
- VDE 0819, Part 103, L/MD Solid
- Cenelec HD 624.3 S1, L/MD Solid

Regulations and approvals

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

- IEC 708
- BT M 237B
- CNET CM 24
- BS 3573

Packaging

BP 28 D780 is sold in pellet form and is available in the following packages: 25 kg bags, 1.1 ton holbins or bulk tankers.

Processing Data

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.

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Properties:

Properties	Test Method	Value	Units ⁽¹⁾
Physical			
Melt flow rate	ISO 1133 Cond. D	0.25	dg/10min
Conventional density conditioning ISO 1872/1	ISO 1183 Method D	929	kg/m ³
Tensile strength @ yield	IEC 811-1-1 ⁽²⁾	15	MPa
Tensile strength @ break	IEC 811-1-1 ⁽²⁾	18	MPa
Elongation @ break	IEC 811-1-1 ⁽²⁾	550	%
Shore D hardness	ISO 868 (1 sec)	56	-
Vicat Softening point, VST/A	ISO 306	106	°C
Electrical			
Dielectric constant @ 1 Hz	ASTM D 1531	2.28	
Dissipation factor @ 1	HzASTM D 1531	100	μrad
Insulation⁽⁵⁾			
Tensile strenght @ break	IEC 811-1-1	20	MPa
Elongation	IEC 811-1-1	600	-
Ageing in air (10 days, 100°C)			
Retention of tensile properties	IEC 811-1-2	90	%
Petroleum Jelly Absorption			
Weight gain	IEC 811-4-2 ⁽³⁾	11	%
Retention of tensile properties	IEC 811-1-1 ⁽³⁾	90	%
Resistance to ageing in air @ 105°C	BT M237, IEC 811-4-2 ⁽⁴⁾	1500	h

(1) Data should not be used for specification work

(2) Measured on plaques prepared according to STP 002

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

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

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



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Regulatory Information

The product and uses described herein may require global product registrations and notifications for chemical inventory listings, or for use in food contact or medical devices. For further information, send an email to psnohreg@innovene.com. Unless specifically indicated, the products mentioned herein are not suitable for applications in the medical or pharmaceutical sector.

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