INEOS Wire & Cable BPD4020

Medium Density Polyethylene

INEOS Olefins & Polymers Europe

Message:

BPD4020 Natural
BPD4020 is a natural medium-density polyethylene grade designed for the extrusion of jackets of power and telecommunication cables.
It 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.
BPD4020 is stabilised and has excellent ageing properties. However it is not UV stabilised, so for outdoor applications an anti UV package needs to be added to lead to a complete outdoor weatherability.

General Information			
Additive	Antioxidation Carbon black (2%)		
Features	High ESCR (Stress Cracking Resistance) Workability, good Good heat aging resistance Medium density		
Uses	Cable sheath Wire and cable applications		
RoHS Compliance	Contact manufacturer		
Appearance	Natural color		
Forms	Particle		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	0.938	g/cm³	ISO 1183/D
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	0.20	g/10 min	ISO 1133
190°C/5.0 kg	0.85	g/10 min	ISO 1133
Environmental Stress-Cracking Resistance (10% Igepal, F0)	> 1000	hr	IEC 811-4-1
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D, 1 sec)	61		ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ISO 527-2
Yield	19.0	MPa	ISO 527-2
Fracture	34.0	MPa	ISO 527-2
Tensile Strain (Break)	> 600	%	ISO 527-2
Aging	**Nominal Value**	**Unit**	**Test Method**

Retention of Mechanical Properties [1] (100°C)	> 75	%	IEC 60811-1-2
Heat Deformation - 6 hrs (115°C)		%	IEC 811-3-1
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-76.0	°C	ISO 974
Vicat Softening Temperature	116	°C	ISO 306/A50
Extrusion	**Nominal Value**	**Unit**	
Cylinder Zone 1 Temp.	180	°C	
Cylinder Zone 2 Temp.	190	°C	
Cylinder Zone 3 Temp.	200	°C	
Cylinder Zone 4 Temp.	200	°C	
Adapter Temperature	210	°C	
Melt Temperature	210 - 230	°C	
Die Temperature	210	°C	
Extrusion instructions			
L/D Ratio: 20:1			
NOTE			
1.	After aging in oven 10 days		

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