Borstar® HE6081

High Density Polyethylene

Borealis AG

Message:

Borstar HE6081 is based on high density polyethylene and has a specially designed additive package to give excellent track resistance. It is also well protected against UV degradation in order to ensure outstanding weathering resistance.
Borstar HE6081 is developed for jacketing of Fibre Optical Cables designed for installation in high voltage power transmission lines.
The compound may also be used for other applications where thermoplastic track resistant materials can be applied.
Borstar HE6081 can resist severe installation conditions and service conditions even at elevated ambient temperatures.
Borstar HE6081 is characterised by excellent:
Mechanical properties
ESCR
Heat deformation resistance
Track resistance
Processing properties

General Information			
Features	Good Processability Good UV Resistance Good Weather Resistance		
Uses	Cable Jacketing Wire & Cable Applications		
Appearance	Black		
Forms	Granules		
Processing Method	Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.10	g/cm³	ISO 1183/D
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	0.40	g/10 min	
190°C/5.0 kg	1.7	g/10 min	
Environmental Stress-Cracking Resistance (10% Igepal, F20)	> 2000	hr	IEC 60811-4-1/B
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D, 1 sec)	59		ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			ISO 527-2
-30°C	2800	MPa	
23°C	1100	MPa	
70°C	200	MPa	
Tensile Stress			ISO 527-2/50
Yield, -30°C	30.0	MPa	
Yield, 0°C	25.0	MPa	

Yield, 70°C	7.00	MPa	
Break, -30°C	30.0	MPa	
Break, 0°C	25.0	MPa	
Break, 70°C	11.0	MPa	
-30°C	30.0	MPa	
0°C	25.0	MPa	
70°C	11.0	MPa	
Tensile Strain			ISO 527-2
Yield, -30°C	4.0	%	
Yield, 0°C	4.0	%	
Yield, 70°C	9.0	%	
Break, -30°C	300	%	
Break, 0°C	400	%	
Break, 70°C	500	%	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-80.0	°C	ASTM D746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Electric Strength	20	kV/mm	IEC 60243-1
Dielectric Constant (50 Hz)	2.50		IEC 60250
Dissipation Factor (50 Hz)	2.0E-4		IEC 60250
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Track Resistance	1.0	day	IEC 660587
Extrusion	**Nominal Value**	**Unit**	
Drying Temperature	80.0 to 100	°C	
Drying Time	4.0 to 6.0	hr	
Melt Temperature	200 to 220	°C	

Recommended distributors for this material

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