DOW™ Electrical & Telecommunications

DGDK-6862 NT

Colorable High Density Polyethylene Compound for Cable Jacketing

The Dow Chemical Company

Message:

Dow AXELERON applied to self-coloring™GP K-6862 NT polyethylene resin is a kind of high density polyethylene resin, which can be used as cable sheath material after proper coloring and stabilization treatment. This material has high hardness, high toughness, high tensile strength, and higher heat resistance. In addition, it also has good flexibility, excellent environmental stress cracking resistance and good processing performance.
Due to its unique performance combination of HDPE and MDPE, Dow AXELERON™GP K-6862 NT is especially suitable as a sheath material for power cables and telecommunication cables.
Processing advice:
Dow AXELERON™GP K-6862 NT extrusion processing can use many common jacketed extruders. Typical extruder barrel temperature depends on many factors, such as extruder specifications and head size. A better starting point is:
when the melting temperature is lower than 250°C, the extruder barrel temperature is set to 140/190/200/200/200/210/210°C.
Application fields:
Dow AXELERON™GP K-6862 NT is a primary color resin that can be blended with carbon black or color masterbatch and a suitable UV stabilizer needs to be added to ensure sufficient weather resistance. It is necessary to add an appropriate amount of antioxidant to ensure its long-term aging resistance. These sheaths can be used for power cables and telecommunications cables, including fiber optic cables.
Storage:
Storage environment and storage conditions will greatly affect the storage time of materials. Storage under extreme conditions may affect the quality, processing or performance of the product. Storage should be carried out in accordance with good manufacturing practices, for example, the storage environment is dry and the storage temperature is between 10 and 30°C.

General Information	
Uses	Cable sheath
	Cable sheath
	Wire and cable applications
	Coaxial cable sheath material
Agency Ratings	ASTM D 1248, III, Class A, Cat. 4 Grade J4
	EN 50290-2-24 Grade HD
	HD 620 S2 Part 1, Table 4B, Compound DMP 2, 9, 10, 14, 15, 17 (black) and DMP 5, 13, 16, 18 (coloured)
	IEC 60502 Type ST7
	IEC 60840 Type ST7
	ISO 1872 PE KGN 40D006
Forms	Particle

Physical	Nominal Value	Unit	Test Method
Density	0.941	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.80	g/10 min	ISO 1133
Environmental Stress-Cracking Resistance (50°C, 10% Igepal, F0)	> 1000	hr	IEC 60811

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 15 sec)	60		ISO 868

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	28.0	MPa	IEC 60811-501
Tensile Elongation			
Fracture [1]	720	%	IEC 60811-401
Fracture	730	%	IEC 60811-501
Flexural Modulus	750	MPa	ISO 178
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature [2]	< -70.0	°C	ASTM D3895
Vicat Softening Temperature	122	°C	ISO 306/A50
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity (23°C)	> 2.0E+16	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	2.30		IEC 60250
Additional Information			
Measured on compression moulded plaques.			
Extrusion	**Nominal Value**	**Unit**	
Melt Temperature	< 250	°C	
Extrusion instructions			
DGDK-6862 NT can be extruded using a range of conventional jacketing extruders. Typical extruder barrel temperatures depend on many factors such as extruder size and die dimensions. A good starting point is:140/190/200/200/200/210/210°C with melt temperatures below 250°C.			
NOTE			
1.	After ageing 10 days @100°C (212°F)		
2.	Notched, F0		

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China