Dow ENDURANCE™ HFDK- 9253 S

Low Sag Super Clean Compound for High Voltage Power Cable Insulation

The Dow Chemical Company

Message:

DOW ENDURANCE™HFDK-9253 S is a low density, low sag, cross-linked polyethylene, specially designed for power cable insulation materials in high voltage and ultra high voltage fields. It meets the requirements of IEC 60840. This product has the following important advantages.

1. Excellent thermal stability
2. Good extrusion processing performance
3. Good thermosetting performance
4. Very low impurity content

General Information			
Agency Ratings	IEC 60840		
Forms	Particle		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density (Base Resin)	0.918 - 0.925	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ISO 1133
Humidity-K-F Method		ppm	DIN 53715
Thermoset [1]			IEC 60811-2-1
Elongation Under Load : 200°C		%	IEC 60811-2-1
Permanent Deformation : 200°C		%	IEC 60811-2-1
MDR - max torque (180°C)	3.00	dNm	ISO 6502
Methanol Wash			Internal method
Insoluble Part		ppm	Internal method
Soluble Part		ppm	Internal method
Scorch Time - TS1 (140°C)	45.0	min	Internal method
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength	20.0	MPa	IEC 60811-1-1
Tensile Elongation (Break)	550	%	IEC 60811-1-1
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength (150°C, 240 hr)	< 20	%	IEC 60811-1-1
Change in Ultimate Elongation (150°C, 240 hr)	< 20	%	IEC 60811-1-1
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	> 1.0E+16	ohms·cm	IEC 60093
Dielectric Strength	> 35	kV/mm	IEC 60243-1
Dielectric Constant (1 MHz)	2.30		IEC 60250
Dissipation Factor (50 Hz)	< 4.0E-4		IEC 60250
Additional Information	**Nominal Value**	**Unit**	**Test Method**

Cleanliness

Extraordinary cleanliness is assured through a number of precautions taken during the manufacturing of ENDURANCE™ HFDK-9253 S. The specifications are set to exclude contaminants >100µm. They are based on online continuous sampling and testing.

Extrusion instructions

以下所建议的是典型的加工条件,具体情况要取决于机器的设计(包括螺杆和机头),筛网的目数,电缆的尺寸等因素.挤出机螺杆直径 : φ150 mmL/D:
24筛网目数: 40/80/150/350/150/80/40 (取决于电压等级)温度设定(摄氏度):C1
C2
C3
C4
C5
C6
连接
机头
螺杆冷却*100
120
120
115
115
115
120
120
70* 部分冷却(仅限加料段)+ 如果不具备螺杆冷却,则建议将C1的温度设定在70摄氏度.+ 如果螺杆全段均有螺杆冷却,则建议将螺杆冷却温度设定在100摄氏度,将C1的设定在70摄氏度.所建议的熔融温度在120至130摄氏度之间.如果超过了130摄氏度,则建议降低C2至C6的设定温度.开车设定值与正常的操作条件相比,开车时的温度设定值建议要高出5到10摄氏度.储存储存环境或是条件会对所允许的储存时间产生极大的影响.
储存应该符合电缆制造商的制造管理规范的要求.所建议的储存温度为15-30°C,
而且应该建立产品使用上先入先出的控制规范.极端条件下的储存可能会影响到产品的品质,加工或是性能.即使在高温下,NUCV-9253S XL K也可保持储存的稳定性.在温度低于15°C的时候有可能开始发生过氧化物的迁移.一般来说,如果储存温度正确地保持在15至30°C的话,则自其生产日期开始,该材料的保质期为两年时间.包装NUCV-9253S XL K 的交货包装有500kg 的UNICLEANTM 大袋或是500kg的底部卸货八角箱.

NOTE

1. 0.2 MPa

Recommended distributors for this material

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