Dow ENDURANCE™ HFDC-0586 BK

Crosslinkable Semiconductive Shielding Compound

The Dow Chemical Company

Message:

DOW ENDURANCE™ HFDC-0586 BK is a specially formulated semiconductive, vulcanizable compound designed for use as an extruded strand conductor shield and bonded insulation shield applications in medium voltage crosslinked polyethylene insulated cables.(1) DOW ENDURANCE™ HFDC-0586 BK has stable volume resistivity characteristics at elevated temperatures and is formulated with a polymer system that has demonstrated compatibility with copper and aluminum conductors.
Specifications
DOW ENDURANCE™ HFDC-0586 BK is designed for use in power distribution cables. Cables with conductor and insulation shielding of DOW ENDURANCE™ HFDC-0586 BK, prepared using sound commercial fabrication practice, would be expected to meet the following specifications:
AEIC: CS8, CS9
BS: 6622
CEA: WCWG-01, WCWG-02
ICEA: S-94-649, S-97-682 AND S-66-524 (NEMA WC7)
IEC: 60502, 60840
DIN: VDE 0273, 0263
Edf: HN-33-S-23, HN-33-S-52
ESI: 09-14
HD: 620 S1
UL: 1072
(1) DOW ENDURANCE™ HFDC-0586 BK is recommended for use in conjunction with DOW cross-linked polyethylene and tree-retardant cross-linked polyethylene compounds For other polymer insulations such as EPR and EPDM's the user is cautioned to establish the utility of DOW ENDURANCE™ HFDC-0586 BK with each formulation.

General Information	
Agency Ratings	AEIC CS8
	AEIC CS9
	BS 6622
	EDF HN 33-S-23
	EDF HN 33-S-52
	HD 620 S1
	ICEA S-66-524
	ICEA S-94-649
	ICEA S-97-682
	IEC 60502
	IEC 60840
	NEMA WC-7
	UL 1072
	VDE 0263
	VDE 0273

Forms	Particle		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.09	g/cm³	ASTM D792
Environmental Stress-Cracking Resistance (100% Igepal, F0)	> 504	hr	ASTM D1693

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	16.9	MPa	ASTM D638
Tensile Elongation (Break)	320	%	ASTM D638
Aging	**Nominal Value**	**Unit**	**Test Method**
Tensile strength retention-1 week (150°C)	95	%	ASTM D638
Elongation retention rate-1 week (150°C)	95	%	ASTM D638
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-40.0	°C	ASTM D746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity			ASTM D991
23°C	15	ohms·cm	ASTM D991
90°C	40	ohms·cm	ASTM D991
130°C	40	ohms·cm	ASTM D991

Additional Information

Nominal property values above represent tests on molded, stress-relieved slabs. Cure times were 15 minutes at 175°C.Storage
The environment or conditions of storage greatly influences the recommended storage time. Storage should be in accordance with good manufacturing practices. If proper warehousing and storage temperatures [dry conditions, between 50°F and 86°F (10°C and 30°C) in temperature] are utilized, this product may be stored by the customer for up to one year. It is recommended that the practice of using the product on a first-in / first-out basis be established. Storage under extreme conditions may affect the quality, processing, or performance of the product.

Extrusion	Nominal Value	Unit
Drying Temperature	60.0	°C
Drying Time	< 6.0	hr
Melt Temperature	116 - 141	°C

Extrusion instructions

DOW ENDURANCE™ HFDC-0586 BK provides excellent surface finish and outstanding output rates over a broad range of conditions. For optimum results, melt extrusion temperatures in the suggested range of 240 to 285°F (115 to 140°C) to avoid pre-cure or scorch. Extruder barrel settings of 110°C (230°F) are suggested as a starting point while learning to process DOW ENDURANCE™ HFDC-0586 BK. Specific machine settings will depend on the extruder design and must be established through conventional practices. Dehumidified hopper drying at 140°F (60°C) for up to 6 hours may be employed to remove moisture prior to extrusion.

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