DOW[™] Electrical & Telecommunications DHDA-7707 BK

Polyolefin

The Dow Chemical Company

Message:

DHDA-7707 BK is a deformation resistant semiconductive material specifically designed for use as insulation shielding for crosslinkable polyethylene insulated power cable. In today's cable technology, DHDA-7707 BK also finds application as a thermoplastic conductor shield and as an overall jacket where superior thermal stress, crack resistance and toughness are valued properties. Other attractive properties include superior volume resistivity stability, and ease of processing.

Specifications

Cables with insulation shielding or jackets of DHDA-7707 BK prepared using sound commercial extrusion practice should meet the following specifications:

AEIC: CS8-00

ICEA: S-94-649

ICEA: S-97-682

General Information			
Agency Ratings	AEIC CS8-00		
	ICEA S-94-649		
	ICEA S-97-682		
Forms	Pellets		
Processing Method	Extrusion		
	Wire & Cable Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	1.12	g/cm³	ASTM D1505
Environmental Stress-Cracking Resistance			ASTM D1693
10% Igepal, F20	> 168	hr	
100% Igepal, F20	> 168	hr	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - Secant	345	MPa	Internal Method
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	11.0	MPa	ASTM D412
Tensile Elongation (Break)	250	%	ASTM D412
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength (121°C, 168 hr)	-15	%	ASTM D412
Change in Ultimate Elongation (121°C, 168			
hr)	-15	%	ASTM D412
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-25.0	°C	ASTM D746
Heat Distortion (ICEA) - plaque			ASTM D2633

90°C	0.0	%	
100°C	0.0	%	
110°C	1.0	%	
121°C	6.0	%	
130°C	25	%	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			ASTM D991
23°C	10	ohms·cm	
60°C	20	ohms·cm	
90°C	1.5E+2	ohms·cm	
110°C	1.5E+2	ohms·cm	
Extrusion	Nominal Value	Unit	
Drying Temperature	68.3 to 79.4	°C	
Drying Time	2.0 to 4.0	hr	
Melt Temperature	191 to 218	°C	

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