AEI SX-0410:CM401

High Density Polyethylene

AEI Compounds Limited

Message:

Ambient cure, silane crosslinkable, polyethylene for low voltage power cable insulation
This crosslinkable polyethylene compound is designed for the insulation of power cables and heating cables; possessing outstanding extrusion properties at high output rates. The graft component SX558 is mixed with the crosslinking catalyst masterbatch CM401 generally in the ratio 95:5. It can be cured at ambient temperatures and is specifically designed for small and sector shaped conductors.

General Information			
Features	Crosslinkable		
Uses	Low voltage insulation Wire and cable applications		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS compliance		
Forms	Particle		
Processing Method	Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	0.930	g/cm³	BS 2782 620A
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.4	g/10 min	Internal method
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress	19.0	MPa	IEC 60811-1-1
Tensile Strain (Break)	450	%	IEC 60811-1-1
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength (135°C, 168 hr)	7.0	%	IEC 60811-1-2
Change in Tensile Strain at Break (135°C, 168 hr)	-7.0	%	IEC 60811-1-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Cold bending (-70°C)	pass		IEC 60811-1-4
Thermoset [1]			IEC 60811-2-1
Elongation under load, 20N/cm² : 200°C		%	IEC 60811-2-1
Permanent elongation after cooling	0.0	%	IEC 60811-2-1
Power factor-50Hz(23°C)	3.00E-4		IEC 60250
Cure Time - <100% Hot elongation [2]			
800.0 µm	5.0	day	
1.50 mm	14.0	day	
Head Temperature	200	°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity (20°C)	> 1.0E+16	ohms·cm	BS 6622
Dielectric Strength (20°C)	21	kV/mm	IEC 60243-1

Relative Permittivity (23°C, 50 Hz)	2.00	IEC 60250

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	130	°C
Cylinder Zone 2 Temp.	150	°C
Cylinder Zone 3 Temp.	170	°C
Cylinder Zone 4 Temp.	190	°C
Die Temperature	210	°C

Extrusion instructions
Most modern thermoplastic extruders will process SX-0410:CM401 compounds, particularly if a screw suitable for polyethylene extrusion is available.

NOTE	
1.	Cure assessment by hot set test (forced cured at 80°C in water)
2.	Cure assessment (ambient cure at 20°C and 50% humidity)

Recommended distributors for this material

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