AEI SX409:CM401

Low Density Polyethylene

AEI Compounds Limited

Message:

Silane crosslinkable polyethylene for medium voltage power cable insulation
This is a silane crosslinkable polyethylene compound, curable by exposure to moist conditions and possessing excellent extrusion properties at high output rates. The graft component SX409 is mixed with a crosslinking catalyst masterbatch CM401 generally in the ratio 95:5.
The SX409:CM401 compound has been specifically developed for cables operating up to 36kV. This compound is typically used in conjunction with SX 539 crosslinkable semi-conducting material for conductor and insulation shields. Strippable outer shields are possible using SX528.

General Information			
Features	Crosslinkable		
Uses	Wire and cable applications Medium voltage insulation		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS compliance		
Forms	Particle		
Processing Method	Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	0.928	g/cm³	BS 2782 620A
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.60 - 0.90	g/10 min	Internal method
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress	18.0	MPa	IEC 60811-1-1
Tensile Strain (Break)	350	%	IEC 60811-1-1
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength (135°C, 168 hr)	4.0	%	IEC 60811-1-2
Change in Tensile Strain at Break (135°C, 168 hr)	-2.0	%	IEC 60811-1-2
Thermal	**Nominal Value**		**Test Method**
Cold bending (-70°C)	pass		IEC 60811-1-4
Power factor-50Hz(23°C)	4.00E-4		IEC 60250
Cure Time [1]			IEC 60811-2-1
3.00 to 6.00mm	6.0 - 24.0	hr	IEC 60811-2-1
8.00 mm	190.0	hr	IEC 60811-2-1
1.50 cm	280.0	hr	IEC 60811-2-1
Head Temperature	170	°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity (20°C)	> 1.0E+16	ohms·cm	IEC 60502
Dielectric Strength (20°C)	21	kV/mm	IEC 60243-1
Relative Permittivity (23°C, 50 Hz)	2.50		IEC 60250

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	150	°C
Cylinder Zone 2 Temp.	160	°C
Cylinder Zone 3 Temp.	170	°C
Cylinder Zone 4 Temp.	180	°C
Die Temperature	180	°C

Extrusion instructions
Most modern thermoplastic extruders will process SX409:CM401 compounds particularly if a screw suitable for polyethylene extrusion is available.

NOTE	
1.	Time when elongation under load ($20N/cm^2$ at 200°C) is less than 100%

Recommended distributors for this material

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