AEI TP519C

Polyethylene

AEI Compounds Limited

Message:

Thermoplastic, low-smoke, halogen-free flame retardant compound for data and communication cable.
This is a flame-retardant low-smoke thermoplastic compound, which has been specially developed to meet the requirements of limited toxic and corrosive fume emission. TP519C has been developed to offer good processability at high extrusion speeds and has very little die drool.
TP519C is available in the following versions:
TP519C (natural colour)
TP519CB (coloured black)
TP519CU (with a non-staining UV stabiliser added)
TP519CBU (carbon black added to give UV stability)

General Information			
Additive	Flame retardancy		
Features	Low smoke Workability, good Halogen-free Flame retardancy		
Uses	Communication Cable Jacketing Flame Retardant Jacketing 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	1.50	g/cm³	BS 2782 620A
Melt Mass-Flow Rate (MFR) (150°C/21.6 kg)	14	g/10 min	Internal method
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A)	90		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress	13.0	MPa	IEC 60811-1-1
Tensile Strain			
Fracture	140	%	IEC 60811-1-1
Fracture, -30°C [1]	50	%	IEC 60811-1-4
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength			
50°C, 336 hr, in Hydrochloric Acid, 1N	17	%	
50°C, 336 hr, in Sodium Hydroxide, 1N	45	%	

70°C, 4 hr, in ASTM #2 oil	18	%	
135°C, 168 hr	12	%	IEC 60811-1-2
Change in Tensile Strain at Break			
50°C, 336 hr, in Hydrochloric Acid, 1N	14	%	
50°C, 336 hr, in Sodium Hydroxide, 1N	20	%	
70°C, 4 hr, in ASTM #2 oil	7.0	%	
135°C, 168 hr	-10	%	IEC 60811-1-2
Thermal	Nominal Value	Unit	Test Method
Deformation (80°C)	15	%	IEC 60811-3-1
Cold shock (-30°C)	pass		IEC 60811-1-4
Cold bending (-30°C)	pass		IEC 60811-1-4
Temperature index	270	°C	ISO 4589-3
Insulation Constant - Ki			IEC 60502
20°C	9.5E+10	ohms·cm	IEC 60502
90°C	6.5E+7	ohms·cm	IEC 60502
Smoke-3m cube test	pass		EN 61034
Halogen Acid Gas Evolution		%	IEC 60754-2
Tear Strength	5	N/mm	BS 6469
Head Temperature	155	°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (20°C)	2.0E+14	ohms·cm	IEC 60502
Dielectric Strength (20°C)	19	kV/mm	IEC 60243-1
Relative Permittivity (23°C, 50 Hz)	4.65		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	31	%	ISO 4589-2
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	115	°C	
Cylinder Zone 2 Temp.	125	°C	
Cylinder Zone 3 Temp.	135	°C	
Cylinder Zone 4 Temp.	145	°C	
Melt Temperature	< 170	°C	
Die Temperature	160	°C	
Extrusion instructions			
An extruder with an L/D ratio (length/diameter) of 15-24 and an extruder screw with a compression ratio 1.2:1 to 2.5:1 are recommended.			
NOTE			
1.	pass		

Recommended distributors for this material

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