

# AEI TP-0840

Polyethylene  
AEI Compounds Limited

Message:

Enhanced fire performance, low-smoke, halogen-free, thermoplastic compound for cable insulation and sheathing.  
This is an enhanced fire performance low-smoke thermoplastic compound designed to comply with the requirements of EN 50290-2-27 for type HM2 and HD 604 for type HM4.  
TP-0840 has superior char forming characteristics when exposed to fire giving excellent performance in vertical cable tray tests such as IEC 60332-3 and EN 50399. Cables sheathed with TP-0840 have been rated at B2 class in the Construction Products Directive (CPD).  
TP-0840 is available in the following versions:  
TP-0840N (natural colour)  
TP-0840B (coloured black)  
TP-0840NU (with a non-staining UV stabiliser added)  
TP-0840BU (carbon black added to give UV stability)

General Information			
Additive	Flame retardancy		
Features	Low smoke		
	Halogen-free		
	Flame retardancy		
Uses	Cable sheath		
	Wire and cable applications		
Agency Ratings	EC 1907/2006 (REACH)		
	EN 50290-2-27		
	HD 604		
RoHS Compliance	RoHS compliance		
Forms	Particle		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	1.50	g/cm <sup>3</sup>	BS 2782 620A
Melt Mass-Flow Rate (MFR) (150°C/21.6 kg)	8.5	g/10 min	Internal method
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress	12.5	MPa	IEC 60811-1-1
Tensile Strain			
Fracture	160	%	IEC 60811-1-1
Fracture, -30°C <sup>1</sup>	50	%	IEC 60811-1-4
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength (100°C, 168 hr)	10	%	IEC 60811-1-2
Change in Tensile Strain at Break (100°C, 168 hr)	-15	%	IEC 60811-1-2

Thermal	Nominal Value	Unit	Test Method
Deformation (90°C)	40	%	IEC 60811-3-1
Cold Bend (-30°C)	pass		IEC 60811-1-4
Temperature index	> 300	°C	ISO 4589-3
Halogen Acid Gas Evolution		%	IEC 60754-1
Head Temperature	160	°C	
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	32	%	ISO 4589-2
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	120	°C	
Cylinder Zone 2 Temp.	130	°C	
Cylinder Zone 3 Temp.	140	°C	
Cylinder Zone 4 Temp.	150	°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 1.5:1 or less are recommended.			
NOTE			

1. pass

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