

Borealis FR4845

Crosslinked Polyethylene

Borealis AG

Message:

FR4845 is an Irradiation Crosslinkable non-halogen flame retardant compound developed for the automotive wire market.
FR4845 is intended for use as a 125°C rated primary insulation for crosslinked automotive wire.
FR4845 in combination meets the applicable requirements as below when processed using sound extrusion and testing procedure:
SAE J1128/J1127

General Information			
Features	Crosslinkable		
	Halogen-free		
	Flame retardancy		
Uses	Wire and cable applications		
	Home appliance components		
	Automotive Electronics		
Agency Ratings	SAE J1127		
	SAE J1128		
Forms	Particle		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.40	g/cm ³	ASTM D792
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	13.8	MPa	ASTM D412
Tensile Elongation (Break)	180	%	ASTM D412
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -40.0	°C	ASTM D2863
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms · cm	ASTM D257
Dielectric Strength	> 550	kV/mm	ASTM D149
Dielectric Constant (23°C, 60 Hz)	3.70		ASTM D150
Dissipation Factor (23°C, 60 Hz)	0.010		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame test ²	Pass		Multiple standards
Extrusion	Nominal Value	Unit	
Drying Temperature	60.0	°C	
Drying Time	2.0 - 8.0	hr	
Cylinder Zone 1 Temp.	127	°C	

Melt Temperature	160 - 165	°C
Extrusion instructions		
Barrel 6: 149°C		
NOTE		
1.	Compound, 23°	
2.	20 AWG, 16 mil cable, ISO 6722/SAE J1128	

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