

# Borealis FR4832

Crosslinked Polyethylene

Borealis AG

Message:

FR4832 is a chemically crosslinkable polyethylene compound for primary automotive wires.  
FR4832 is intended for use as a 125°C rated primary insulation for crosslinked automotive wires.  
FR 4832 in combination meets the applicable requirements as below when processed using sound extrusion and testing procedure: SAE J1128/J1127

General Information			
Features	Crosslinkable		
Uses	Automotive Electronics		
	Wire & Cable Applications		
Agency Ratings	SAE J1127		
	SAE J1128		
Forms	Pellets		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.40	g/cm <sup>3</sup>	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	50		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	17.3	MPa	ASTM D412
Tensile Elongation (Break)	200	%	ASTM D412
Aging	Nominal Value	Unit	
Retention of Tensile Properties - After Ageing <sup>1</sup> (165°C)	> 80	%	
Flame Test <sup>2</sup>	Pass		Multiple Standards
Thermal	Nominal Value	Unit	
Brittleness Temperature	< -50.0	°C	
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
Oxygen Index	25	%	ASTM D2863
Extrusion	Nominal Value	Unit	
Drying Temperature	55.0	°C	
Drying Time	2.0 to 8.0	hr	

Cylinder Zone 1 Temp.	96.0	°C
Adapter Temperature	110	°C
Melt Temperature	120 to 125	°C

NOTE		
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1.	240 h
2.	ISO 6722/SAE J1128, 20 AWG - 16 mil cable

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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