



Polyethylene FR4830

Chemically Crosslinkable Polyethylene Compound for Primary Automotive Wires

Description

FR4830 is a chemically crosslinkable Non-halogen flame retardant Polyethylene compound for Primary Automotive and Appliance Wire.

Applications

FR4830 is intended for use as a 125° C rated primary insulation for crosslinked automotive and appliance wires.

Specifications

FR4830 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

SAE J1128/J1127
UL 44 SIS

UL AWN Style 3173, 125 °C

Physical Properties

Property	Typical Value	Test Method
	Data should not be used for specification work	
Density (Compound) (23 °C)	1400 kg/m ³	ASTM D 792
Tensile Strain at Break	220 %	ASTM D 412
Tensile Strength	16 MPa	ASTM D 412
Tensile Strength	2.300 psi	ASTM D 412
Retention of Tensile Properties After Ageing (168 h, 165 °C)	>= 80 %	
Brittleness temperature	< -50 °C	ASTM D 2863
Hardness, Shore D	50	ASTM D 2240

Electrical Properties

Property	Typical Value	Test Method
	Data should not be used for specification work	
Dielectric constant (60 Hz) ¹	3,7	ASTM D 150
Volume Resistivity	> 10 POhm.cm	ASTM D 257
Dielectric Strength	> 22 kV/mm	ASTM D 149
Dielectric Strength	> 550 V/mil	
Dissipation Factor (60 Hz) ¹	0,01	ASTM D 150

¹ 23 °C



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Combustion Properties

Property	Typical Value	Test Method
Limited Oxygen Index	25 %	ASTM D 2863
Flame Test (20 AWG - 16 mil cable)	Pass	ISO 6722/SAE J1128

Data should not be used for specification work

Processing Techniques

Please contact your Borealis representative for more details.

Typically the following process conditions are used:

Drying in dehumidified air (2 - 8 h)	55 °C
Barrel 1	96 °C
	200 °F
Barrel 6	110 °C
	230 °F
Max allowed Melt temperature	125 °C
	257 °F

Packaging

Package: Smallbins

Package: Bulk

Storage

FR4830 has a shelf life of 12 months from delivery date if stored in unopened original packages, under dry and clean conditions at temperatures between 10 - 30 °C (50 - 85 °F).

Safety

Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of safety, recovery and disposal of the product. For more information, contact your Borealis representative.



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