



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
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 PΩcm	ASTM D 257
Dielectric Strength	> 22 kV/mm	ASTM D 149
Dissipation Factor (60 Hz) ¹	0,01	ASTM D 150

¹ 23 °C

Combustion Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Limiting Oxygen Index	25 %	ASTM D 2863
Flame Test (20 AWG - 16 mil cable)	Pass	ISO 6722/SAE J1128



Polyethylene FR4830

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
Barrel 6	110 °C
Max allowed Melt temperature	125 °C

Packaging

Package: Smallbins

Package: Bulk

Storage

FR4830 has a shelf life of 24 months from production 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.

Disclaimer

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of any Borealis product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above.