



Polyethylene FR4832

Chemically Crosslinkable Polyethylene Compound for Primary Automotive Wires

Description

FR4832 is a Chemically Crosslinkable Polyethylene Compound for Primary Automotive Wires.

Applications

FR4832 is intended for use as a 125° C rated primary insulation for crosslinked automotive wire.

Specifications

FR4832 in combination meets the applicable requirements as below when processed using sound extrusion and testing procedure:

SAE J1128/J1127

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	200 %	ASTM D 412
Tensile Strength	17,25 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
DC Volume Resistivity	10 POhm.cm	ASTM D 257
Dielectric Strength	> 550 V/mil	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		
Limited Oxygen Index	25 %	ASTM D 2863
Flame Test (20 AWG - 16 mil cable)	Pass	ISO 6722/SAE J1128





Polyethylene FR4832

Processing Techniques

Following parameters should be used as guidelines:

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	-120 - 125 °C

Packaging

Package: Smallbins

Package: Bulk

Storage

FR4832 has a shelf life of 12 months from production date if stored in unopened original packages, under dry and clean conditions at temperatures between 10 - 30 °C (50 - 85 °F).

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 Borealis' products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.

