



Polyethylene FR4845

Irradiation Crosslinkable Polyethylene Compound for Primary Automotive Wires

Description

FR4845 is an Irradiation Crosslinkable non-halogen flame retardant compound developed for the automotive wire market.

Applications

FR4845 is intended for use as a 125° C rated primary insulation for crosslinked automotive wire.

Specifications

FR4845 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
Bulk density	800 - 900 kg/m ³	
Tensile Strain at Break	180 %	ASTM D 412
Tensile Strength	13,8 MPa	ASTM D 412
Brittleness temperature	< -40 °C	ASTM D 2863

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	> 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		
Flame Test (20 AWG - 16 mil cable)	Pass	ISO 6722/SAE J1128

PRODUCT DATA SHEET



Processing Techniques

Please contact your Borealis representative for more details.

Following parameters should be used as guidelines:

Drying in dehumidified air (2 - 8 h)	60 °C
Barrel 1	127 °C
Barrel 6	149 °C
Max allowed Melt temperature	160 - 165 °C

Packaging

Package: Smallbins

Package: Bulk

Storage

FR4845 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).

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.

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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.

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