



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



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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.

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