30.07.2009 Ed.1

Polyethylene
FR4837

Chemically Crosslinkable Polyethylene Compound for Primary Automotive Wires

Description

FR4837 is a chemically crosslinkable Non-halogen flame retardant Polyethylene compound for Primary Automotive and Appliance Wire.

Applications

FR4837 is intended for use as a 125º C rated primary insulation for crosslinked automotive wire.

Specifications

FR4837 in combination meets the applicable requirements as below when processed using sound extrusion and testing procedure:

SAE J1128/J1127

Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density (Compound) (23 °C)	1400 kg/m3	ASTM D 792
Tensile Strain at Break (165 °C)	220 %	ASTM D 412
Tensile Strength	16 MPa	
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 Data should not be used for specification work	Test Method
Dielectric constant (> 60 Hz) [1]	3,7	ASTM D 150
DC Volume Resistivity	10 POhm.cm	ASTM D 257
Dielectric Strength	> 22 kV/mm	
Dissipation Factor (60 Hz) [1]	0,01	ASTM D 150

[1] 23 °C

Combustion Properties

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

Borealis AG | Wagramerstrasse 17-19 | 1220 Vienna | Austria
Telephone +43 1 224 00 0 | Fax +43 1 22 400 333
FN 269858a | CCC Commercial Court of Vienna | Website www.borealisgroup.com

BOREALIS

30.07.2009 Ed.1

Polyethylene
FR4837

Processing Techniques
Please contact your Borealis representative for more details.

The following conditions may be used as a guide when starting up the extruder.

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
FR4837 has a shelf life of 18 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.

Borealis AG | Wagramerstrasse 17-19 | 1220 Vienna | Austria
Telephone +43 1 224 00 0 | Fax +43 1 22 400 333
FN 269858a | CCC Commercial Court of Vienna | Website www.borealisgroup.com

BOREALIS