

PRODUCT DATA SHEET

22.11.2016 Ed.1



Polypropylene

FR4850

Halogen Free Flame Retardant Polypropylene Compound

Description

FR4850 is a halogen free flame retardant polypropylene compound for Primary Automotive Wire.

Applications

FR4850 is intended for use as a 125 °C rated primary insulation for automotive thin wall wires of 1.5 mm² or 16 AWG conductors and finer.

Specifications

FR4850 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

SAE J1128/J1127
GMW15626
Chrysler MS-12441

Ford ES-AU5T-1A348-AA
ISO 6722

Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density (Compound) (23 °C)	1350 kg/m ³	ISO 1872-2/ISO 1183
Melt Flow Rate (230 °C/2,16 kg)	0,7 g/10min	ISO 1133
Tensile Strain at Break	> 300 %	IEC 60811-1-1
Tensile Strength	> 20 MPa	IEC 60811-1-1
Retention of Elongation after Ageing (168 h, 165 °C)	> 50 %	SAE J1128
Retention of Tensile Strength after Ageing (168 h, 165 °C)	> 50 %	SAE J1128
Brittleness temperature	< -40 °C	ISO 6722
Hardness, Shore D	70	ISO 868

Electrical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Dielectric constant (50 Hz) ¹	3	IEC 250

¹ 23 °C

Other properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Limiting Oxygen Index	27 %	ISO 4589-2
Flame Test	Pass	ISO 6722/SAE J1128
UL Horizontal Flame Test	Pass	UL2556

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Needle Scrape Abrasion
Sandpaper Abrasion
Long term heat ageing (3000 h, 125 °C)

Pass
Pass
Pass

ISO 6722
ISO6722/SAE J1128
ISO 6722

Processing Techniques

A melt temperature of 250 °C and preheating of the conductor is recommended.

Packaging

Package: Smallbins
Package: 25 kg Bags

Storage

FR4850 normally does not need pre-drying unless the material has been stored in a moist environment for a long period. In such cases drying in dehumidified air for 4 hours at 70°C will normally reduce the moisture content to an acceptable value.

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.

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