



# Polypropylene FR4852

Halogen Free Flame Retardant Polypropylene Compound

## Description

**FR4852** is a halogen free flame retardant polypropylene compound for Primary Automotive Wire.

## Applications

**FR4852** is intended for use as a 125 °C rated primary insulation for automotive thin wall wires of 2,5 mm<sup>2</sup> or 14 AWG conductors and larger.

## Specifications

**FR4852** meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

SAE J1128/J1127  
Chrysler MS-12441  
Ford ES-AU5T-1A348-AA

GMW15626  
ISO 6722

## Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density (Compound) (23 °C)	1270 kg/m <sup>3</sup>	ISO 1872-2/ISO 1183
Melt Flow Rate (230 °C/2,16 kg)	0,9 g/10min	ISO 1133
Tensile Strain at Break	> 300 %	IEC 60811-501
Tensile Strength	> 15 MPa	IEC 60811-501
Retention of Tensile Strength after Ageing (168 h, 165 °C)	> 50 %	SAE J1128
Retention of Elongation after Ageing (168 h, 165 °C)	> 50 %	SAE J1128
Brittleness temperature	< -40 °C	ISO 6722
Hardness, Shore D	60	ISO 868

## Electrical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Dielectric constant (50 Hz) <sup>1</sup>	3	IEC 250
<sup>1</sup> 23 °C		

## Other properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Limiting Oxygen Index	24 %	ISO 4589-2
Flame Test	Pass	ISO 6722/SAE J1128
UL Horizontal Flame Test	Pass	UL2556
Needle Scrape Abrasion	Pass	ISO 6722



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

Pass  
Pass

ISO6722/SAE J1128  
ISO 6722

## Processing Techniques

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

It is recommended to always dry **FR4852** prior to extrusion. Recommended drying time is 4 - 12 hours in 50 - 80°C in a dehumidifying type dryer.

## Packaging

Package: Octabins with Alu-liner

Package: 25 kg Bags

## Storage

**FR4852** has a shelf life of 24 months from production date if stored in unopened original packages, under dry and clean conditions, protected from sunlight at temperatures between 10 - 30°C (50 - 85°F).

## 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.

**Polypropylene**  
**FR4852****Disclaimer**

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