

PRODUCT DATA SHEET

22.01.2026 Ed.2

Polyethylene

FR4830

Crosslinkable Polyethylene Compound for Automotive Wires

Description

FR4830 is a chemically crosslinkable halogen-free flame retardant polyethylene compound via continuous vulcanization (C.V.) process for primary automotive and appliance wire.

Applications

FR4830 is intended for following applications:

125° C rated primary insulation for crosslinked automotive and appliance wires.

Specifications

SAE J1128/J1127

UL 44 SIS

UL AWM Style 3173, 125 °C

Physical properties

Property	Typical value *	Unit	Test method
Density	1400	kg/m ³	ASTM D792
Tensile strain at break	220	%	ASTM D638
Tensile strength	16	MPa	ASTM D638
Retention of Tensile strain after ageing (168 h, 165 °C)	e 80	%	ASTM D638
Retention of Tensile strength after ageing (168 h, 165 °C)	e 80	%	ASTM D638
Brittleness temperature	<-50	°C	ASTM D746
Hardness, Shore D	50	-	ASTM D2240

* Data should not be used for specification work

Other properties

Property	Typical value *	Unit	Test method
Limiting Oxygen Index	25	%	ASTM D2863
Flame test ¹	Pass	-	ISO 6722
Flame test ¹	Pass	-	SAE J1128

* Data should not be used for specification work

¹ (20 AWG - 16 mil cable)

Processing setting	Typical value/range
Drying temperature ²	55 °C
Barrel temperature 1	96 °C
Barrel temperature 4	110 °C
Maximum melt temperature	125 °C

² - 8h



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Processing techniques

Typically, the following process conditions are used. Please contact your Borealis representative for more details.

Packaging and storage

FR4830 is available in smallbins or bulk packaging.

FR4830 has a shelf life of 24 months from production date. It should be stored in dry conditions at temperatures between 10 - 30°C (50 - 85 °F) and protected from UV-light. Improper storage can initiate degradation, which can result in odour generation and colour changes and can have negative effects on the physical properties of this product.

Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website www.borealisgroup.com.

Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DfC) and Design for Recycling (DfR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DfR helps ensure that material can be effectively recycled while maximizing the material performance efficiency.

Further information on sustainability and Design for Recycling (DfR) can be found from our websites www.borealisgroup.com and www.borealiseverminds.com.

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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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.

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