Bayblend® FR3021

FR grades / Mineral filled

(PC+ABS)-Blend; 15 % mineral filled; flame retardant; Vicat/B 120 temperature = 98 °C; high stiffness; tensile modulus = 4800 MPa;; UL recognition 94 V-0 at 1.5 mm; glow wire temperature (GWFI): 960 °C at 2.0 mm

ISO Shortname

PC+ABS-TD15 FR(40)

	Property	Test Condition	Unit	Standard	typical Value
Rheological properties					
C	Melt volume-flow rate	240 °C; 5 kg	cm³/10 min	ISO 1133	13
	Melt viscosity	1000 s^{-1}; 260 °C	Pa·s	b.o. ISO 11443-A	165
	Molding shrinkage, parallel	150x105x3 mm; 240 °C / MT 80 °C	%	b.o. ISO 2577	0.3 - 0.5
	Molding shrinkage, normal	150x105x3 mm; 240 °C / MT 80 °C	%	b.o. ISO 2577	0.3 - 0.5
Mechanical properties (23 °C/50 % r. h.)					
C	Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	4800
C	Yield stress	50 mm/min	MPa	ISO 527-1,-2	65
C	Yield strain	50 mm/min	%	ISO 527-1,-2	3.0
	Stress at break	50 mm/min	MPa	ISO 527-1,-2	40
	Strain at break	50 mm/min	%	b.o. ISO 527-1,-2	10
	Izod notched impact strength	23 °C	kJ/m²	ISO 180-A	6.0
Thermal properties					
C	Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	85
C	Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	92
C	Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	96
	Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	98
C	Coefficient of linear thermal expansion, parallel	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.46
C	Coefficient of linear thermal expansion, transverse	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.63
C	Burning behavior UL 94 (1.5 mm) [UL recognition]	1.5 mm	Class	UL 94	V-0
C	Burning behavior UL 94	1.2 mm	Class	UL 94	V-0 (GY,BK)
Electrical properties (23 °C/50 % r. h.)					
C	Relative permittivity	100 Hz	-	IEC 60250	3.1
C	Relative permittivity	1 MHz	-	IEC 60250	3.0
C	Dissipation factor	100 Hz	10^{-4}	IEC 60250	50
C	Dissipation factor	1 MHz	10^{-4}	IEC 60250	70
C	Volume resistivity		Ohm·m	IEC 60093	1E14
C	Surface resistivity		Ohm	IEC 60093	1E16
C	Electrical strength	1 mm	kV/mm	IEC 60243-1	35
C	Comparative tracking index CTI	Solution A	Rating	IEC 60112	275
Other properties (23 °C)					
C	Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.5
C	Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.2
C	Density		kg/m³	ISO 1183-1	1280
Processing conditions for test specimens					
C	Injection molding-Melt temperature		°C	ISO 294	240
C	Injection molding-Mold temperature		°C	ISO 294	80
C	Injection molding-Injection velocity		mm/s	ISO 294	240

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

Impact properties: N = non-break, P = partial break, C = complete break

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Disclaimer

Information Impact properties

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Typical value

These values are typical values only. Unless explicitly agreed in written form, the do not constitute a binding material specification or warranted values. Values may be affected by the design of the mold/die, the processing conditions and coloring/pigmentation of the product. Unless specified to the contrary, the property values given have been established on standardized test specimens at room temperature.

General

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by Covestro. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent. With respect to health, safety and environment precautions, the relevant Material Safety Data Sheets (MSDS) and product labels must be observed prior to working with our products.

Disclaimer Non Medical Grade

This product is not designated for the manufacture of a medical device or of intermediate products for medical devices (1). [This product is also not designated for Food Contact (2), including drinking water, or cosmetic applications. If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices, for Food Contact products or cosmetic applications Covestro must be contacted in advance to provide its agreement to sell such product for such purpose.] Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices, for Food Contact products or cosmetic applications must be made solely by the purchaser of the product without relying upon any representations by Covestro. 1) Please see the "Guidance on Use of Covestro Products in a Medical Application" document. 2) As defined in Commission Regulation (EU) 1935/2004.

Covestro AG

Polycarbonates Business Unit

Kaiser-Wilhelm-Allee 60

51373 Leverkusen

Germany

plastics@covestro.com

www.plastics.covestro.com