



ALCOM PBT 700/1 GF30 TF15 SI2

(Last update: 19.02.2024)



Base Polymer	Polybutylene Terephthalate
Filler/Additive System	30 % glass fibres, 15 % PTFE, 2 % silicone
Special Features	improved sliding / wear, heat stabilised, high stiffness
Market Segment	Automotive, Machinery
Application Area	gear wheels, roller bearings
Typical Applications	functional components, bearings and sliding elements

Pre-Drying Conditions	in a dry air (dessiccant) dryer 100-120 °C for 2-4 h in an air circulating dryer 100-120 °C for 4-8 h dependant on moisture content
-----------------------	---

Processing Injection Moulding	melt temperature 250-270 °C mould temperature 80-120 °C
-------------------------------	--

Storage	dry, protected from light
---------	---------------------------

Properties	Value	Dimension	Test Norm
Mechanical Properties			
Flexural Modulus	8600	MPa	ISO 178
Flexural Strength	175	MPa	ISO 178
Tensile Modulus	9800	MPa	ISO 527
Tensile Strength at Break	115	MPa	ISO 527
Tensile Elongation at Break	2.6	%	ISO 527
Impact Strength (Charpy, 23 °C)	50	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy, -40 °C)	50	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy, 23 °C)	9	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy, -40 °C)	9	kJ/m ²	ISO 179/1eA
Thermal Properties			
Vicat B50	212	°C	ISO 306
HDT / A (1,8 MPa)	214	°C	ISO 75-1/-2
DSC (Melt Point)	227	°C	ISO 11357
Rheological Properties			
Shrinkage (lengthwise, 24h)	0.2 - 0.4	%	ISO 294-4
Shrinkage (lateral, 24h)	0.5 - 0.7	%	ISO 294-4
Physical Properties			
Density	1630	kg/m ³	ISO 1183



ALCOM PBT 700/1 GF30 TF15 SI2

(Last update: 19.02.2024)



Tribologic Properties

Coefficient of Sliding Friction μ ($p_v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	0.28	-	ASTM G 137
Coefficient of Sliding Friction μ_H ($p_v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	0.19	-	ASTM G 137
Specific Wear Rate w_s ($p_v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	1.2	E-6 mm ³ /Nm	ASTM G 137
Linear Wear Rate w ($p_v = 5 \cdot 1 \text{ MPa} \cdot \text{m/s}$)	21	$\mu\text{m/h}$	ASTM G 137

Liability Exclusion

These are guide values and not a specification. The test values mentioned are representative values only and not binding minimum or maximum figures. These test values have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions.

Any information given on the chemical and physical characteristics of our products, including, without limitation, technical advice on applications, whether verbally, in writing or by testing the product, is given to the best of our knowledge and in good faith and does not exempt the buyer from carrying out their own investigations and tests in order to ascertain the product's specific suitability for the purpose intended.

The buyer is solely responsible for confirming the suitability of the product for a particular application, its utilization and processing and must observe any applicable laws and government regulations. **NO EXPRESS OR IMPLIED RECOMMENDATION OR WARRANTY IS GIVEN WITH REGARD TO THE SUITABILITY OF THE PRODUCT FOR A PARTICULAR APPLICATION, SUCH AS, BUT NOT LIMITED TO, SAFETY-CRITICAL COMPONENTS OR SYSTEMS.**

Healthcare uses: the supply of any product by ALBIS for any medical, pharmaceutical or diagnostic application is conditional to an assessment by ALBIS in terms of compliance with ALBIS' internal risk management policy – even for products which are in general designated for use in Healthcare applications.

Important: irrespective of product type or designation, ALBIS does not recommend or support the use of any products it supplies which fall into the following medical, pharmaceutical or diagnostic application categories:

- risk class III applications according to EU directive 93/42/EEC
- any bodily implant application for greater than 30 days
- any critical component in any medical device that supports or sustains human life.

At all times, our standard terms and conditions of sale apply.