

Application purpose and characteristics

Mechanical engineering, vehicle construction, electrical industry
High form stability, excellent sliding properties, high abrasion resistance

Material name, short description	PA 66
Material name, based on technical standards	Polyamide 66
Density	1.15 g/cm ³
Color	natural (opaque)
Compound code	PA 66 00.003-00

Mechanical properties

Modulus of elasticity & tension 1	3200 N/mm ² DIN EN ISO 527 dry conditions
Tensile strength	80 N/mm ² ISO 527 dry conditions
Yield stress	80 N/mm ² ISO 527 dry conditions
Elongation at rupture	50 % ISO 527 dry conditions
Hardness test value	80 Shore D
Impact strength	no break ISO 179-1/1eU dry conditions, 23 °C
Notch impact strength	80.00 kJ/m ² DIN EN ISO 179-1eA dry conditions

Thermal attributes

Max. operating temperature long term	100 °C min. 5000 h
Max. operating temperature short term	200 °C
Limit temperature	255 °C
Coefficient of linear thermal expansion 1	7-10 10 ⁻⁵ K ⁻¹ DIN 53752 dry conditions
Crystalline melting point	255 °C ISO 3146 Method A
Heat deflection temperature 1	100 °C ISO 75 dry conditions, Methode A
Specific heat capacity	1.7 J/(g·K) IEC 1006 dry conditions
Thermal conductivity	0.23 W/(m·K) Methode A, dry conditions

Other attributes

Moisture absorption	2.8 % ISO 62 50 % RH, 23 °C
Water absorption	8.5 % ISO 62 in water at 23 °C

In compliance with **RoHS** and **REACH** directives.

This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.

Electrical attributes

Comparative tracking index	≥ 600 IEC 112 dry/humid conditions, KA/KB Stufe
Dielectric dissipation factor 1	0.026 IEC 250 dry conditions, 1 MHz
Dielectric dissipation factor 2	2 IEC 250 humid conditions, 1 MHz
Dielectric constant 1	3.2 IEC 250 dry conditions, 1 MHz
Dielectric constant 2	5 IEC 250 humid conditions, 1 MHz
Dielectric strength 1	120 kV/mm IEC 243 dry conditions, 1 MHz
Dielectric strength 2	80 kV/mm IEC 243 humid conditions, 1 MHz
Surface resistivity	10 ¹³ Ω IEC 93 dry conditions
Volume resistivity	10 ¹⁵ Ω*cm DIN IEC 93 dry conditions

Approvals / Compliance

Food & Beverage	FDA CFR 21 - 177.1500 "Nylon resins"
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