

HabiPLAST™ Material Data Sheet

PE05 green for tracks and machined parts



Material description

- Low friction High Molecular Weight Polyethylene (PE-HMW)
- Moderate wear rate with POM, PP, PA belts or chains
- Good damping properties
- Resistant against cleaning agents typically used in food applications
- Not resistant against UV-Light

Material properties

General	Nominal value
Code	PE05-W PE05-W+FG
Color	natural white
Density	0.96 g/cm ³
Average molecular weight	0.5 • 106 g/mol
Water absorption	<0.01 %
Thermal	Nominal value
Temperature range	-70°C to +65°C
Coeff. of linear thermal expansion a	0.20 mm/(m•K)
Electrical	Nominal value
Volume resistivity	10 ¹⁴ Ohm•cm
Surface resistivity	10 ¹⁴ Ohm
Mechanical	Nominal value
Tensile modulus	~1100 MPa
Tensile strength (ultimate)	≥28 Mpa
Tensile elongation (break)	≥200%
Charpy notched impact resistance	≥25 mJ/mm ²
Ball hardness	~50 mPA

Coefficient of friction and wear rate

Belt / Chain	Friction (-) ⁽¹⁾	Wear rate ⁽²⁾
HabasitLINK® POM	0.23	n.a.
HabasitLINK® PP	0.23	n.a.
HabasitLINK® PA	0.31	n.a.
HabaCHAIN® DP	0.26	n.a.
HabaCHAIN® LF	0.22	n.a.
HabaCHAIN® PT	0.25	n.a.
HabaCHAIN® TS	0.22	n.a.
HabaCHAIN® NG	0.24	n.a.
Stainless Steel	0.27	B

A++, Best performance
A+, Good performance
A, Standard combination
B, Acceptable but not recommended
C, Bad combination, do not use

⁽¹⁾ measured on a test conveyor with 1500 kg/m² load, speed range 5 – 15 m/min, test distance 800 km, standard conditions

⁽²⁾ evaluated from pin on disk test, total wear rate of pin and disk together, standard conditions

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Habasit support for design and calculation

To assist the layout and calculation of Habasit plastic modular belt conveyors, Habasit provides additional documentation and instruments on request.

- Engineering Guide with further complementary details to the design and calculation of conveyors.
- Calculation Program to analyze the dimensioning and acting forces of a planned conveyor design.

For further information or additional documentation please contact Habasit.

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