

HabiPLAST™ Material Data Sheet

PE40 for tracks and machined parts



Material description

- Low friction Ultra High Molecular Weight Polyethylene (PE-UHMW)
- Good damping properties
- Good impact resistance
- Resistant against cleaning agents typically used in food applications
- Not resistant against UV-Light

Material properties

General	Nominal value
Code	PE40-W+FG
Color	natural white
Density	0.93 g/cm ³
Average molecular weight	5 • 10 ⁶ 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 ¹² Ohm•cm
Surface resistivity	>10 ¹² Ohm
Mechanical	Nominal value
Tensile modulus	~700 MPa
Tensile strength (yield)	~18 Mpa
Tensile elongation (brake)	≥200%
Charpy notched impact resistance	≥170 mJ/mm ²
Ball hardness	~38 MPa

Coefficient of friction and wear rate

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

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



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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