

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-G
Color	green
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 (ultimate)	~18 Mpa
Tensile elongation (break)	≥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

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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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