

# HabiPLAST™ Material Data Sheet

## PE40+EC for tracks and machined parts



### Material description

- Low friction Ultra High Molecular Weight Polyethylene (PE-UHMW)
- Low electrical resistance, suitable for ESD protected areas (EPA)
- As support material for flame-retardant HabasitLINK belts, the burning behavior is classified as Cfl-S1 according to DIN EN 13501 (comparable to former DIN 4102 B1)
- Low wear rate with antistatic, conductive and or flame-retardant belts or chains
- Good damping properties
- Good impact resistance
- Good resistance against automotive fluids
- Good UV-Light resistance

コード	Property
PE40-B+EC	

### Material properties

General	Nominal value
Code	PE40-B+EC
Color	black
Density	0.93 g/cm <sup>3</sup>
Average molecular weight	5 • 10 <sup>6</sup> 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 <sup>4</sup> Ohm•cm
Surface resistivity	>10 <sup>4</sup> Ohm
Mechanical	Nominal value
Tensile modulus	~700 MPa
Tensile strength (ultimate)	~18 Mpa
Tensile elongation (brake)	≥200%
Charpy notched impact resistance	≥140 mJ/mm <sup>2</sup>
Ball hardness	~38 MPa

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### Coefficient of friction and wear rate

Belt / Chain	Friction (-) <sup>(1)</sup>	Wear rate <sup>(2)</sup>
HabasitLINK® POM+AS	0.22	A++
HabasitLINK® POM+EC	0.24	A
HabasitLINK® PP+AS	0.25	A++
HabaCHAIN® PP+EC	0.21	A+
HabaCHAIN® PP+FR	0.27	A
HabaCHAIN® PP+FC	0.24	A+
HabaCHAIN® EC	0.24	A

A++, Best performance

A+, Good performance

A, Standard combination

B, Acceptable but not recommended

C, Bad combination, do not use

<sup>(1)</sup> measured on a test conveyor with 1500 kg/m<sup>2</sup> load, speed range 5 – 15 m/min, test distance 800 km, standard conditions

<sup>(2)</sup> 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.

### Disclaimer

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