

# HabiPLAST™ Material Data Sheet

## TriboPlus TP40 for corner tracks and machined parts



### Material description

- Low friction Ultra High Molecular Weight Polyethylene (PEUHMW)
- Very low wear rate
- Less dusting, less microplastic compared to standard PEUHMW
- Higher speed and load limit (high PxV limit) compared to standard PEUHMW
- Resistant against cleaning agents typically used in food applications
- Halogen free and RoHS conform
- Silicon free
- No limitations regarding recycling or incineration
- Suitable for direct food contact (not for fatty food), see Food Certificates – DoC on [www.Habasit.com](http://www.Habasit.com)

### Material properties

General	Nominal value
Code	TP40-C+FG
Color	blue
Density	0.93 g/cm <sup>3</sup>
Water absorption	< 0.01 %
Thermal	Nominal value
Temperature range	-70°C to +65°C -94°F to +150°F
Coeff. of linear thermal expansion a	0.20 mm/(m•K) 0.00133 in/(ft•°F)
Electrical	Nominal value
Volume resistivity	>10 <sup>14</sup> Ohm•cm
Surface resistivity	>10 <sup>13</sup> Ohm
Mechanical	Nominal value
Tensile modulus	≥600 MPa
Tensile strength (ultimate)	≥24M pa
Tensile elongation (break)	≥140%
Charpy notched impact resistance	260 mJ/mm <sup>2</sup>
Ball hardness	30 N/mm <sup>2</sup>

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### Coefficient of friction and wear rate

Belt / Chain	Friction (-) <sup>(1)</sup>	Wear rate <sup>(2)</sup>
HabasitLINK® POM	0.17	A++
HabasitLINK® PP	0.16	A+
HabasitLINK® WHI	0.15	A++
HabasitLINK® PA	0.18	A+
HabasitLINK® PA+FRF	0.22	A++
HabasitLINK® PE	0.25	B
HabaCHAIN® DP	0.17	A++
HabaCHAIN® LF	0.16	A++
HabaCHAIN® PT	0.17	A+
HabaCHAIN® TS	0.15	A++
HabaCHAIN® NG	0.18	A++
Stainless Steel	0.13	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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