

# Technical datasheet [Page 1/2]

## Composite PE 500 + TPE (Polyethylene/HMW-PE with thermoplastic elastomer covering)

Example of application
› mats for lifting platforms or similar applications; bumper guard for e.g. piers

Advantages		Disadvantages	
PE 500	TPE	PE 500	TPE
› low weight › low water absorption	› good chemical resistance › good weatherproof › good acoustic insulation properties › good wear properties › non-slip covering › surface protection › impact resistance › low weight	› limited weldability › high thermal expansion	› difficult mechanical processing (milling)


Basic information	Specification
Format	on request
Color	on request

Physical properties	Standard term/Specification*		Unit	Testing method
	PE 500	TPE		
Density	0.96	0.92	g/cm <sup>3</sup>	ISO 1183
Moisture ingress	≤ 0.01	≤ 0.01	%	DIN EN ISO 62

Mechanical properties	Standard term/Specification*		Unit	Testing method
	PE 500	TPE		
Tensile strength	28	n.sp.	MPa	DIN EN ISO 527
Elongation at break	650	n.sp.	%	DIN EN ISO 527
E-Module	1.100	n.sp.	MPa	DIN EN ISO 527
Notch toughness	25.0	n.sp.	kJ/m <sup>2</sup>	ISO 179
Rochwellhardness	50	n.sp.	MPa	DIN EN ISO 2039
Shore A (material available in two types)	n.sp.	55 respectively 77	°Sh A	DIN ISO 7619-1

Should you require binding and exact values, please ask for the appropriate factory certificate. This may incur additional costs. Please note that all specifications are standard values only, which are subject to production-related fluctuations.

\*Higher specification on request.

continuation 

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Thermal properties	Standard term/Specification*		Unit	Testing method
	PE 500	TPE		
Thermal conductivity	0.40	n.sp.	W/(m·K)	DIN 52612
Linear thermal expansion coefficient based on a fixed initial length	1.5	n.sp.	K <sup>-1</sup> · 10 <sup>-4</sup>	DIN 53752
	3.0		mm	At initial length of 1.000 mm and a temperature difference of 20 °C.
Max. operating temperature, long-term	80	n.sp.	°C	
Max. operating temperature, short-term	n.sp.	n.sp.	°C	
Min. operating temperature, long-term	-40	n.sp.	°C	

Electrical properties	Standard term/Specification*		Unit	Testing method
	PE 500	TPE		
Resistance	10 <sup>14</sup>	n.sp.	Ω·cm	DIN IEC 60093
Outer surface coefficient	10 <sup>14</sup>	n.sp.	Ω	DIN IEC 60093
Puncture resistance	150	n.sp.	kV/mm	DIN EN 60243

Legend
n.sp. = not specified

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