

Techninal plastics

Table of technical plastics

General information	PEHD 300	PEHD 500	PEHD 1000	PEHD 2000	POM-C	PA (Nylon)	PET	PVDF	PEEK	PTFE (Teflon®)	ABS	PP
Chemical name	Polyethylene High Density	Polyethylene High Density	Polyethylene High Density	Polyethylene High Density	Polyoxymethylene Copolymer	Polyamide	Polyethylene-terephthalate	Polyvinylidene flouride	Polyether-etherketone	Polytetraflour-ethylene	Akrylonitrile butadiene styrene	Polypropylene
Density	0.95 g/cm ³	0.95 g/cm ³	0.93 g/cm ³	0.94 g/cm ³	1.41 g/cm ³	1.15 g/cm ³	1.36 g/cm ³	1.78 g/cm ³	1.31 g/cm ³	2.18 g/cm ³	1.05 g/cm ³	0.92 g/cm ³
Temp. min.	- 50 °C	- 100 °C	- 200 °C	- 200 °C	- 50 °C	- 40 °C	- 20 °C	- 30 °C	- 40 °C	- 200 °C	- 10 °C	- 10 °C
Temp. max.	80 °C	80 °C	80 °C	80 °C	100 °C	100 °C	110 °C	150 °C	260 °C	260 °C	75 °C	100 °C
Temp. melting point	130 °C	135 °C	135 °C	135 °C	166 °C	221 °C	244 °C	171 °C	341 °C	-	102 °C	165 °C
Moisture absorption	Low	Low	Low	Low	Low	High	Very low	Very low	Very low	Very low	Average	Very low
Thermal expansion*	High	High	High	High	High	High	Average	High	Low	High	Average	High
Friction	Average	Low	Very low	Extremely low	Low	Very low	Low	Low	Low	Extremely low	High	Low
Wear by water/sand	Poor	Good	Excellent	Excellent	Poor	Excellent	Average	Average	Average	Good	Poor	Average
Chemical resistance	Good	Good	Good	Good	Good	Good	Good	Excellent	Good	Excellent	Poor	Excellent
Rigidity (E-module)	Rigid	Average	Soft	Soft	Very rigid	Rigid	Very rigid	Average	Very rigid	Extremely soft	Rigid	Soft
Elektrical insulation	Average	Average	Average	Average	Good	Good	Good	Good	Excellent	Excellent	Average	Average
Standard colours												
Optional colours								None	Few	None		
Antibacterial	Not possible	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Not possible	Optional
FCM: FDA & EU 10/2011	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Not possible	Optional
Flammability (UL94)	Optional	Optional	Optional	Optional	HB**	HB**	HB**	VO***	VO***	VO***	HB**	HB**
Antistatic/AS	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Not possible	Optional
UV resistance	Optional	Optional	Optional	Optional	Only black	Black/blue	Not possible	Standard	Not possible	Standard	Not possible	Only black

Processing methods	PEHD 300	PEHD 500	PEHD 1000	PEHD 2000	POM-C	PA (Nylon)	PET	PVDF	PEEK	PTFE (Teflon®)	ABS	PP
Machining	Good	Good	Good	Average	Good	Average	Good	Average	Good	Average	Average	Poor
Cold bending	Good	Average	Poor	Not possible	Poor	Average	Poor	Poor	Not possible	Poor	Average	Good
Heat bending	Good	Poor	Poor	Poor	Average	Average	Average	Poor	Not possible	Not possible	Good	Good
Dimensional stability	Poor	Average	Average	Average	Good	Good	Excellent	Good	Excellent	Poor	Poor	Average

Possible additives	
Carbonfiber	Becomes electrically conductive/antistatic. Strengthen mechanical properties. Prevents cold flow.
Glass	Increases strength. Increases brief service temperatures.
Oil	Reduces friction. Supplies self-lubricating properties. Increases non-stick capability.
Wax	Reduces friction. Supplies self-lubricating properties. Good under high loading.
Teflon®	Reduces friction.

* Contact us for exact calculation

** HB = Horizontal burn/drip

*** VO = Vertical burn/do not drip, burn up.

This table is meant as a guide. You are more than welcome to contact us, if you wish specific calculation or advice regarding construction and selection of material.

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