

# THERMOPLASTICS - chemical & environmental resistance

For comparison purposes only. End users should always conduct their own evaluation of the compounds to ensure satisfactory compatibility with any environmental or physical conditions to which they may be exposed.

Base resin		Weak acids	Strong acids	Weak alkalis	Strong alkalis	Organic solvents	Alcohols	Hydro carbons	Fuels	Gamma radiation	UV radiation
PP	Polypropylene	●	● <sup>1</sup>	●	●	● <sup>3</sup>	●	●	●	●	●
PA 6/6	Nylon 6/6	●	●	●	●	●	●	●	●	●	●
PA 6	Nylon 6	●	●	●	●	●	●	●	●	●	●
PA 6/10	Nylon 6/10	●	●	●	●	●	●	●	●	●	●
PA 11	Nylon 11	●	●	●	●	●	●	●	●	●	●
PA 6/12	Nylon 6/12	●	●	●	●	●	●	●	●	●	●
PA	Amorphous nylon	●	●	●	●	●	●	●	●	●	●
PA 12	Nylon 12	●	●	●	●	●	●	●	●	●	●
PA 6/6	Impact modified nylon 6/6	●	●	●	●	●	●	●	●	●	●
PC	Polycarbonate	●	● <sup>1</sup>	●	●	● <sup>3</sup>	●	●	●	●	●
PS	Polystyrene	●	● <sup>1</sup>	●	●	● <sup>3</sup>	●	●	●	●	●
SAN	Styrene acrylonitrile	●	● <sup>2</sup>	●	●	● <sup>4</sup>	●	●	●	●	●
ABS	Acrylonitrile butadiene styrene	●	● <sup>1</sup>	●	●	● <sup>4</sup>	●	●	●	●	●
HDPE	High density polyethylene	●	● <sup>1</sup>	●	●	● <sup>5</sup>	●	●	●	●	●
LDPE	Low density polyethylene	●	●	●	●	●	●	●	●	●	●
POM	Acetal	●	●	●	●	●	●	●	●	●	●
PSU	Polysulfone	●	●	●	●	●	●	●	●	●	●
PBT	Polybutylene terephthalate	●	●	●	●	●	●	●	●	●	●
PET	Polyethylene terephthalate	●	●	●	●	●	●	●	●	●	●
TPUR	Ester-based thermoplastic polyurethane elastomer	●	●	●	●	●	●	●	●	●	●
TPUR	Ether-based thermoplastic polyurethane elastomer	●	●	●	●	●	●	●	●	●	●
PPS	Polyphenylene sulfide	●	●	●	●	●	●	●	●	●	●
PES	Polyethersulfone	●	●	●	●	● <sup>3</sup>	●	●	●	●	●
TEEE	Polyether-ester block copolymer thermoplastic elastomer	●	●	●	●	● <sup>6</sup>	● <sup>8</sup>	● <sup>8</sup>	●	●	●
PPO	Modified polyphenylene oxide	●	●	●	●	●	●	●	●	●	●
PMMA	Acrylic	●	●	●	●	●	●	●	●	●	●
PC/PMMA	Polycarbonate/acrylic alloy	●	●	●	●	●	●	●	●	●	●

● Excellent ● Good ● Fair ● Poor

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Base resin		Weak acids	Strong acids	Weak alkalis	Strong alkalis	Organic solvents	Alcohols	Hydro carbons	Fuels	Gamma radiation	UV radiation
PEI	Polyetherimide	●	●	●	●	● <sup>4</sup>	●	●	●	●	●
PEEK	Polyetheretherketone	●	●	●	●	●	●	●	●	●	●
PEK	Polyetherketone	●	●	●	●	●	●	●	●	●	●
RPTU	Rigid thermoplastic polyurethane	●	●	●	●	● <sup>4</sup>	●	●	●	●	●
PC/ABS	Polycarbonate/ABS alloy	●	● <sup>1</sup>	●	●	● <sup>3</sup>	●	●	●	●	●
SBC	Styrenic block copolymer thermoplastic elastomer	●	●	●	●	● <sup>3</sup>	●	●	●	●	●
TPV	Thermoplastic vulcanizate	●	●	●	●	● <sup>3</sup>	●	● <sup>7</sup>	● <sup>7</sup>	●	●
PEBA	Polyether block amide thermoplastic elastomer	●	●	●	●	●	●	●	●	●	●
PMP	Polymethylpentene	●	● <sup>1</sup>	●	●	● <sup>3</sup>	●	●	●	●	●
PFA	Perfluoroalkoxy	●	●	●	●	●	●	●	●	●	●
ETFE	Ethylene tetrafluoroethylene	●	●	●	●	●	●	●	●	●	●
PVDF	Polyvinylidene fluoride	●	●	●	●	●	●	●	●	●	●
LCP	Liquid crystal polymer	●	●	●	●	●	●	●	●	●	●
FEP	Fluorinated ethylene propylene	●	●	●	●	●	●	●	●	●	●
PEKEKK	Polyetherketoneetherketonone	●	●	●	●	●	●	●	●	●	●
PPA	Polyphthalamide	●	●	●	●	●	●	●	●	●	●
PEKK	Polyetherketoneketone	●	●	●	●	●	●	●	●	●	●
TPI	Thermoplastic polyimide	●	●	●	●	●	●	●	●	●	●
PSU/PC	Polysulfone/polycarbonate alloy	●	●	●	●	●	●	●	●	●	●
HTN	High temperature nylon	●	●	●	●	●	●	●	●	●	●
SPS	Syndiotactic polystyrene	●	●	●	●	●	●	●	●	●	●
PTT	Polytrimethylene terephthalate	●	●	●	●	●	●	●	●	●	●

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1. Attacked by oxidising acids.
2. Attacked by sulfuric acid.
3. Soluble in aromatic and chlorinated hydrocarbons.
4. Soluble in ketones and esters, aromatic and chlorinated hydrocarbons.
5. Below 80°C.
6. At ambient temperature.
7. Property retention with swelling.
8. Varies in hardness.

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