

Chemical & Environmental Resistance of Thermoplastics

These chemical and environmental resistance ratings for thermoplastics are provided for comparison purposes only. No assurance can be implied that any General Polymers Thermoplastic Materials supplied compound will meet the ratings listed. End users should conduct their own evaluation of General Polymers Thermoplastic Materials supplied 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
Polypropylene	PP	E	G ¹	E	E	P ²	G	F	F	P	F
Nylon 6/6	PA 6/6	G	P	E	F	E	G	G	G	F	P
Nylon 6	PA 6	G	P	E	F	E	G	G	G	F	F
Nylon 6/10	PA 6/10	G	P	E	F	E	G	F	G	F	F
Nylon 11	PA 11	G	P	E	F	G	P	G	G	F	F
Nylon 6/12	PA 6/12	G	P	E	F	G	P	G	G	F	F
Amorphous Nylon	PA	G	P	E	F	F	P	F	F	F	F
Nylon 12	PA 12	G	P	E	F	G	P	E	G	F	F
Impact-Modified Nylon 6/6	PA	G	P	E	F	G	P	F	G	F	F
Polyarylamide	PAA	G	P	E	F	E	G	G	G	F	F
Polycarbonate	PC	E	F ¹	F	P	P ²	G	P	P	G	F
Polystyrene	PS	E	F ¹	G	G	P ²	G	P	P	G	P
Styrene Acrylonitrile	SAN	G	G ²	G	G	P ⁴	P	P	P	G	P
Acrylonitrile Butadiene Styrene	ABS	E	G ¹	E	E	P ⁴	P	P	P	G	P
High Density Polyethylene	HDPE	E	G ¹	E	E	G ⁵	E	G	G	F	P
Low Density Polyethylene	LDPE	E	G	E	E	G	E	F	G	F	F
Acetal	POM	P	P	F	P	E	F	G	G	P	P
Polysulfone	PSU	E	E	E	E	G	G	P	P	G	F
Polybutylene Terephthalate	PBT	G	P	P	P	E	G	P	G	G	F
Polyethylene Terephthalate	PET	G	P	P	P	E	G	P	G	G	F
Ester-based Thermoplastic Polyurethane Elastomer	TPU	F	P	F	P	P	F	E	G	F	P
Ether-based Thermoplastic Polyurethane Elastomer	TPU	F	P	F	P	P	F	G	F	F	P
Polyphenylene Sulfide	PPS	E	E	E	E	G	E	E	G	G	G
Polyethersulfone	PES	E	P	E	E	P ²	F	P	F	G	F
Polyether-Ester Block Copolymer Thermoplastic Elastomer	TEEE	G	P	F	P	P/E ⁵	E ⁶	P/E ⁵	E	P	G

Ratings

E = Excellent
G = Good
F = Fair
P = Poor

Notes

- (1) Attacked by oxidizing 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 176 °F (80 °C).
- (6) At ambient temperature.
- (7) Property retention with swelling.
- (8) Varies with hardness.

800-920-8033

Stocking programs - JIT deliveries
Blending Services - Small Lot Colors
partners with key Strategic Suppliers
Material & Part Design Recommendations



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GP General Polymers

Thermoplastic Materials

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Base Resin		Weak Acids	Strong Acids	Weak Alkalis	Strong Alkalis	Organic Solvents	Alcohols	Hydro Carbons	Fuels	Gamma Radiation	UV Radiation
Modified Polyphenylene Oxide	PPO	E	E	E	E	P	P	F	P	F	F
Acrylic	PMMA	P	P	G	F	P	P	P	F	G	G
Acrylic/Polycarbonate Alloy	PC/PMMA	G	G	G	G	P	F	P	F	F	F
Polyetherimide	PEI	E	E	E	P	P ⁴	F	P	F	G	F
Polyetheretherketone	PEEK	E	E	E	E	E	E	E	G	G	G
Polyetherketone	PEK	E	E	E	E	E	E	E	G	G	G
Rigid Thermoplastic Polyurethane	RTPU	G	G	F	G	P ⁴	P	P	F	F	P
Polycarbonate/ABS Alloy	PC/ABS	E	G ¹	G	F	P ³	P	P	P	G	F
Saturated Styrenic Block Copolymer Thermoplastic Elastomer	TES	E	G	E	G	P ³	G	P	P	G	G
Unsaturated Styrenic Block Copolymer Thermoplastic Elastomer	TES	E	G	E	G	P ³	G	P	P	P	P
Thermoplastic Polyolefin Elastomer	TEO	E	G	E	G	P ³	E	F ⁷	F ⁷	P	F
Polyether-Block-Amide Thermoplastic Elastomer	PEBA	E	E	E	E	E	E	E	E	F	E
Polymethylpentene	PMP	E	G ¹	E	E	P ³	G	P	F	G	F
Perfluoroalkoxy	PFA	E	E	E	E	E	E	E	G	G	G
Ethylene Tetrafluoroethylene	ETFE	E	E	E	E	E	E	E	G	G	G
Polyvinylidene Fluoride	PVDF	E	E	E	E	E	E	E	G	G	G
Liquid Crystal Polymer	LCP	E	E	E	E	E	E	E	G	G	G
Fluorinated Ethylene Propylene	FEP	E	E	E	E	E	E	E	G	F	P
Polyetherketoneetherketoneketone	PEKEKK	E	E	E	E	E	E	E	G	G	G
Polyphthalamide	PPA	E	G	E	G	E	G	E	G	G	F
Polyetherketoneketone	PEKK	E	E	E	E	E	E	E	G	G	G
Thermoplastic Polyimide	TPI	E	E	E	E	E	E	E	E	E	E
Polysulfone/Polycarbonate Alloy	PSU/PC	E	G	G	G	F	G	F	G	F	F
High Temperature Nylon	HTN	F	P	E	F	G	G	P	G	F	F
Syndiotatic Polystyrene	SPS	E	E	E	E	G	G	G	G	G	G
Polytrimethylene Terephthalate	PTT	G	P	P	P	E	G	P	G	G	F

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