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 RTP Company compound will meet the ratings listed. End users should conduct their own evaluation of RTP Company compounds to ensure satisfactory compatibility with any environmental or physical conditions to which they may be exposed.

Key:

- **E** – Excellent
- **G** – Good
- **F** – Fair
- **P** – Poor

RTP Series	Base Resin		Weak Acids	Strong Acids	Weak Alkalis	Strong Alkalis	Organic Solvents	Alcohols	Hydro Carbons	Fuels	Gamma Radiation	UV Radiation
100	Polypropylene	(PP)	E	G[1]	E	E	P[3]	G	F	F	P	F
200	Nylon 6/6	(PA 6/6)	G	P	E	F	E	G	G	G	F	P
200 A	Nylon 6	(PA 6)	G	P	E	F	E	G	G	G	F	F
200 B	Nylon 6/10	(PA 6/10)	G	P	E	F	E	G	F	G	F	F
200 C	Nylon 11	(PA 11)	G	P	E	F	G	P	G	G	F	F
200 D	Nylon 6/12	(PA 6/12)	G	P	E	F	G	P	G	G	F	F
200 E	Amorphous Nylon	(PA)	G	P	E	F	F	P	F	F	F	F
200 F	Nylon 12	(PA 12)	G	P	E	F	G	P	E	G	F	F
200 H	Impact-Modified Nylon 6/6	(PA 6/6)	G	P	E	F	G	P	F	G	F	F
300	Polycarbonate	(PC)	E	F[1]	F	P	P[3]	G	P	P	G	F
400	Polystyrene	(PS)	E	F[1]	G	G	P[3]	G	P	P	G	P
500	Styrene Acrylonitrile	(SAN)	G	G[2]	G	G	P[4]	P	P	P	G	P
600	Acrylonitrile Butadiene Styrene	(ABS)	E	G[1]	E	E	P[4]	P	P	P	G	P
700	High Density Polyethylene	(HDPE)	E	G[1]	E	E	G[5]	E	G	G	F	P
700 A	Low Density Polyethylene	(LDPE)	E	G	E	E	G	E	F	G	F	F
800	Acetal	(POM)	P	P	F	P	E	F	G	G	P	P
900	Polysulfone	(PSU)	E	E	E	E	G	G	P	P	G	F
1000	Polybutylene Terephthalate	(PBT)	G	P	P	P	E	G	P	G	G	F
1100	Polyethylene Terephthalate	(PET)	G	P	P	P	E	G	P	G	G	F
1200 S	Ester-based Thermoplastic Polyurethane Elastomer	(TPUR)	F	P	F	P	P	F	E	G	F	P
1200 T	Ether-based Thermoplastic Polyurethane Elastomer	(TPUR)	F	P	F	P	P	F	G	F	F	P
1300	Polyphenylene Sulfide	(PPS)	E	E	E	E	G	E	E	G	G	G
1400	Polyethersulfone	(PES)	E	P	E	E	P[3]	F	P	F	G	F
1500	Polyether-Ester Block Copolymer Thermoplastic Elastomer	(TEEE)	G	P	F	P	P/E[8]	E[6]	P/E[8]	E	P	G
1700	Modified Polyphenylene Oxide	(PPO)	E	E	E	E	P	P	F	P	F	F

1800	Acrylic	(PMMA)	P	P	G	F	P	P	P	F	G	G
1800 A	Polycarbonate/Acrylic Alloy	(PC/PMMA)	G	G	G	G	P	F	P	F	F	F
2100	Polyetherimide	(PEI)	E	E	E	P	P[4]	F	P	F	G	F
2200	Polyetheretherketone	(PEEK)	E	E	E	E	E	E	E	G	G	G
2200 A	Polyetherketone	(PEK)	E	E	E	E	E	E	E	G	G	G
2300	Rigid Thermoplastic Polyurethane	(RTPU)	G	G	F	G	P[4]	P	P	F	F	P
2500	Polycarbonate/ABS Alloy	(PC/ABS)	E	G[1]	G	F	P[3]	P	P	P	G	F
2700 S	Saturated Styrenic Block Copolymer Thermoplastic Elastomer	(TES)	E	G	E	G	P[3]	G	P	P	G	G
2700	Unsaturated Styrenic Block Copolymer Thermoplastic Elastomer	(TES)	E	G	E	G	P[3]	G	P	P	P	P
2800	Thermoplastic Polyolefin Elastomer	(TEO)	E	G	E	G	P[3]	E	F[7]	F[7]	P	F
2900	Polyether-Block-Amide Thermoplastic Elastomer	(PEBA)	E	E	E	E	E	E	E	E	F	E
3000	Polymethylpentene	(PMP)	E	G[1]	E	E	P[3]	G	P	F	G	F
3100	Perfluoroalkoxy	(PFA)	E	E	E	E	E	E	E	G	G	G
3200	Ethylene Tetrafluoroethylene	(ETFE)	E	E	E	E	E	E	E	G	G	G
3300	Polyvinylidene Fluoride	(PVDF)	E	E	E	E	E	E	E	G	G	G
3400	Liquid Crystal Polymer	(LCP)	E	E	E	E	E	E	E	G	G	G
3500	Fluorinated Ethylene Propylene	(FEP)	E	E	E	E	E	E	E	G	F	P
3900	Polyetherketoneetherketoneketone	(PEKEKK)	E	E	E	E	E	E	E	G	G	G
4000	Polyphthalamide	(PPA)	E	G	E	G	E	G	E	G	G	F
4100	Polyetherketoneketone	(PEKK)	E	E	E	E	E	E	E	G	G	G
4200	Thermoplastic Polyimide	(TPI)	E	E	E	E	E	E	E	E	E	E
4300	Polysulfone/Polycarbonate Alloy	(PSU/PC)	E	G	G	G	F	G	F	G	F	F
4400	High Temperature Nylon	(HTN)	F	P	E	F	G	G	P	G	F	F
4600	Syndiotactic Polystyrene	(SPS)	E	E	E	E	G	G	F	F	F	F
4700	Polytrimethylene Terephthalate	(PTT)	G	P	P	P	E	G	P	G	G	F
RTP Series	**Base Resin**		**Weak Acids**	**Strong Acids**	**Weak Alkalis**	**Strong Alkalis**	**Organic Solvents**	**Alcohols**	**Hydro Carbons**	**Fuels**	**Gamma Radiation**	**UV Radiation**

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 degrees F (80 degrees C).
6. At ambient temperature.
7. Property retention with swelling.
8. Varies with hardness.

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