

PHYSICAL PROPERTIES

PLASTIC	THERMAL PROPERTIES				STRENGTH		DENSITY
ABBREVIATION - BRAND NAME	TM (°C)	TG (°C)	TD (°C)	CTE (PPM/°C)	TENSILE (PSI)	COMPRESSIVE (PSI)	G/CC
PET Polyethylene Terephthalate	245 - 265	73 - 80	21 - 38	65	7000 - 10500	11000 - 15000	1.29 - 1.40
LDPE Low-Density Polyethylene	98 - 115	-25	40 - 44	100 - 220	1200 - 4550	-	0.917 - 0.932
HDPE High-Density Polyethylene	130 - 137	-	79 - 91	59 - 110	3200 - 4500	2700 - 3600	0.952 - 0.965
PP Polypropylene	168 - 175	-20	107 - 121	81 - 100	4500 - 6000	5500 - 8000	0.900 - 0.910
PVC Polyvinyl Chloride	-	75 - 105	57 - 82	50 - 100	5900 - 7500	8000 - 13000	1.30 - 1.58
PS Polystyrene	-	74 - 105	68 - 96	50 - 83	5200 - 7500	12000 - 13000	1.04 - 1.05

- TM** Crystalline melting temperature (some plastics have no crystallinity and are said to be amorphous)
- TG** Glass transition temperature (the plastic becomes brittle below this temperature)
- TD** Heat distortion temperature under a 66 PSI load
- CTE** Coefficient of linear thermal expansion

- Tensile Strength** Load necessary to pull a sample of plastic apart
- Compressive Strength** Load necessary to crush a sample of the plastic
- Density** Also know as specific gravity/ mass of plastic per unit volume



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