



DSC Transitions of Common Thermoplastics

The following is a table that lists the DSC transitions associated with some of the more commonly utilized thermoplastics. The values here are

associated with the 'standard' structure or morphology of the thermoplastic. It should be noted that the melting temperatures as well as the glass transition temperatures (T_g) can be

significantly affected by orientation, moisture, molecular weight, annealing or thermal history, as well as other factors.

<i>Plastic</i>	<i>Most Common State</i>	<i>T_g (° C)</i>	<i>T_m (° C)</i>
PET	Semi-Crystalline	75	252
PBT	Semi-Crystalline	52	225
Nylon 6	Semi-Crystalline	56 (dry)	221
Nylon 6,6	Semi-Crystalline	75 (dry)	254
Nylon 11	Semi-Crystalline		190 to 200
Nylon 12	Semi-Crystalline		180 to 210
Polyetherether-ketone (PEEK)	Semi-Crystalline	133	340
Polyethylene (HDPE)	Highly crystalline	?	130
Polyethylene (LDPE)	Semi-Crystalline	-40 (?)	105-120
PPS	Semi-Crystalline	85	285
Polypropylene	Semi-Crystalline	-5	175
Polystyrene	Amorphous	104	---
Polycarbonate	Amorphous	150	(235)
Polyphenylene oxide (PPO)	Amorphous	210	---
PMMA	Amorphous	110	---
PVC	Amorphous	80 (unplasticized)	---
• ABS	Copolymer	-80 (rubber) & 104 (SAN)	---
EVA	Copolymer	-26 (vinyl acetate)	50-100 (ethylene)
Polyphenylene sulfide (PPS)	Semi-Crystalline	80	280
Polysulfone	Amorphous	190	---
• Polybutadiene	Amorphous	-86	(-20)
Polyacrylonitrile (PAN)	Amorphous	100	(320)
Polyvinyl alcohol (PVA)	Amorphous	85	(230 to 248)
Polyvinyl acetate (PVAC)	Amorphous	30	---
Polyetherimide (PEI)	Amorphous	215	---
Polyimide	Amorphous	around 370	
Polyetherimide (PEI)	Amorphous	215	
Perfluoroalkoxy (PFA)	Semi-Crystalline		308
PTFE	Semi-Crystalline	130	345

The values presented in this table represent the best-known values for these polymers in their most standard form. However, due to factors such as thermal history,

molecular weight distribution, plasticizing agents, molecular orientation, presence of moisture, incorporation of copolymers, the measured T_g and T_m of some

polymers may shift significantly from the values listed here.

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