Common Plastic Substrates For Microfluidics

Polymer	Acronym	T_g (°C)	T_m (°C)	CTE (10^{-6}°C^{-1})	Water absorption (%)	Solvent resistance	Acid/base resistance	Optical transmissivity	
								Visible	UV[a]
Cyclic olefin (co)polymer	COC/COP	70–155	190–320	60–80	0.01	Excellent	Good	Excellent	Excellent
Polymethylmethacrylate	PMMA	100–122	250–260	70–150	0.3–0.6	Good	Good	Excellent	Good
Polycarbonate	PC	145–148	260–270	60–70	0.12–0.34	Good	Good	Excellent	Poor
Polystyrene	PS	92–100	240–260	10–150	0.02–0.15	Poor	Good	Excellent	Poor
Polypropylene	PP	−20	160	18–185	0.10	Good	Good	Good	Fair
Polyetheretherketone	PEEK	147–158	340–350	47–54	0.1–0.5	Excellent	Good	Poor	Poor
Polyethylene terephthalate	PET	69–78	248–260	48–78	0.1–0.3	Excellent	Excellent	Good	Good
Polyethylene	PE	−30	120–130	180–230	0.01	Excellent	Excellent	Fair	Fair
Polyvinylidene chloride	PVDC	0	76	190	0.10	Good	Good	Good	Poor
Polyvinyl chloride	PVC	80	180–210	50	0.04–0.4	Good	Excellent	Good	Poor
Polysulfone	PSU	170–187	180–190	55–60	0.3–0.4	Fair	Good	Fair	Poor