

Common Polymer Materials Maximum Shear Stress and Shear Rates

| Material (Abbr) | | Material Name | Maximum Shear Stress (MPa) | Maximum Shear Rate (1/s) |
|-----------------|---|----------------------------------|----------------------------|--------------------------|
| ABS | A | Acrylonitrile-Butadiene-Styrene | 0.30 | 50,000 |
| LCP | L | Liquid Crystal Polymer | 0.50 | 60,000 |
| PA | S | Polyamide | 0.50 | 60,000 |
| PBT | S | Polybutylene Terephthalate | 0.40 | 50,000 |
| PC | A | Polycarbonate | 0.50 | 40,000 |
| PC/ABS | A | Polycarbonate & ABS | 0.40 | 40,000 |
| PE | S | Polyethylene | 0.26 | 40,000 |
| HDPE | S | High Density <i>Polyethylene</i> | 0.08 | 40,000 |
| LDPE | S | Low Density <i>Polyethylene</i> | 0.10 | 40,000 |
| PEEK | S | Poly-ether-ether-ketone | 0.50 | 10,000 |
| PEEK Filled | S | Poly-ether-ether-ketone | 0.50 | 10,000 |
| PET | S | Polyethylene Terephthalate | 0.50 | 50,000 |
| PMMA | A | Polymethyl Methacrylate | 0.40 | 40,000 |
| POM | S | Polyoxymethylene | 0.45 | 40,000 |
| PP | S | Polypropylene | 0.25 | 100,000 |
| PPS | S | Polyphenylene Sulfide | 0.50 | 50,000 |
| PS | A | Polystyrene | 0.25 | 40,000 |
| PSU | A | Polysulfone | 0.50 | 50,000 |
| PVC | A | Polyvinyl Chloride | 0.30 | 20,000 |
| SAN | A | Styrene acrylonitrile | 0.30 | 40,000 |
| SB | A | Styrene-Butadiene | 0.25 | 40,000 |
| TPE | S | Thermoplastic Elastomers | 0.30 | 40,000 |
| TPO | S | Thermoplastic Olefin | 0.50 | 100,000 |
| TPU | S | Thermoplastic Polyurethane | 0.25 | 40,000 |