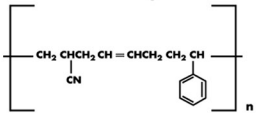
MP, Tg, and Structure of Common Polymers

Melting Point (MP) and Glass Transition Temperature (Tg) are the most important thermodynamic parameters for the common polymers. These properties can be easily and quicky determined by DSC.

- Melting point temperature range (° C)
- Glass transition temperature range (° C)

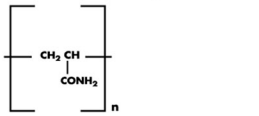
ABS

T_g: 110° to 125°C



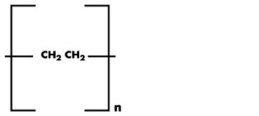
Polyacrylamide

T_g: 160° to 170°C



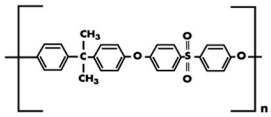
Polyethylene (High Density)

T_m: 130° to 140°C T_g: -125°C



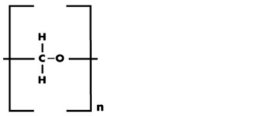
Polysulfone

T_g: 185° to 195°C



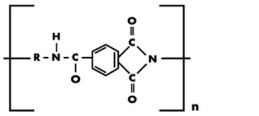
Acetal

T_m: 175° to 185°C



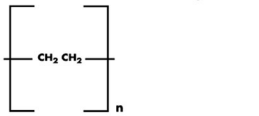
Polyamide-Imide

T_g: 270° to 280°C



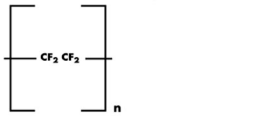
Polyethylene (Low Density)

T_m: 85° to 125°C T_g: -130°C



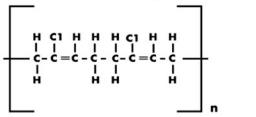
Polytetrafluoroethylene (PTFE)

T_m: 320° to 330°C T_g: 120° to 130°C



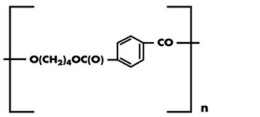
Neoprene

T_g: - 40° to -20°C



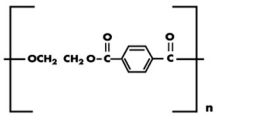
Polybutylene Terephthalate (PBT)

T_m: 220° to 270°C



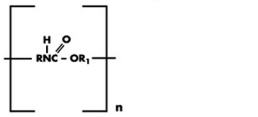
Polyethylene Terephthalate (PET)

T_m: 245° to 265°C T_g: 70° to 80°C



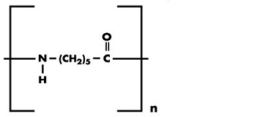
Polyurethane (Thermoplastic)

T_g: 120° to 160°C



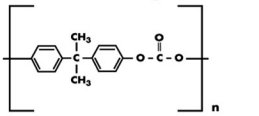
Nylon 6

T_m: 210° to 220°C T_g: 40° to 60°C



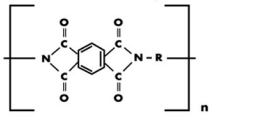
Polycarbonate

T_g: 140° to 150°C



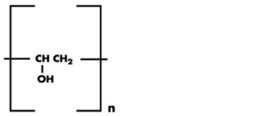
Polyimide

T_g: 310° to 365°C



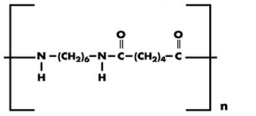
Polyvinyl Alcohol

T_g: 80° to 90°C



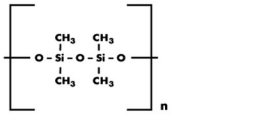
Nylon 6/6

T_m: 240° to 265°C T_g: 50° to 60°C



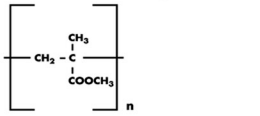
Polydimethylsiloxane (PDMS)

T_g: -130° to -120°C



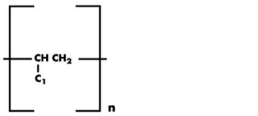
Polymethyl Methacrylate (PMMA)

T_g: 85° to 105°C



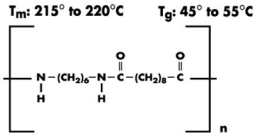
Polyvinyl Chloride (PVC)

T_g: 65° to 85°C



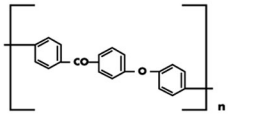
Nylon 6/10

T_m: 215° to 220°C T_g: 45° to 55°C



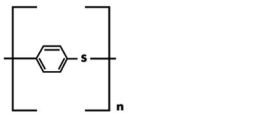
Polyetheretherketone (PEEK)

T_m: 330° to 340°C



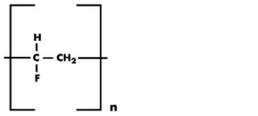
Polyphenylene Sulfide

T_m: 275° to 290°C T_g: 85° to 95°C



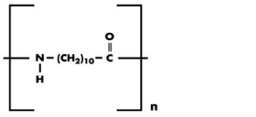
Polyvinyl Fluoride

T_g: 35° to 45°C



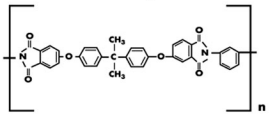
Nylon 11

T_m: 190° to 200°C



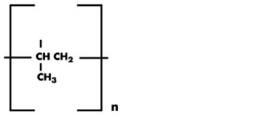
Polyetherimide

T_g: 215° to 220°C



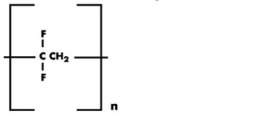
Polypropylene

T_m: 165° to 175°C T_g: -20° to -5°C



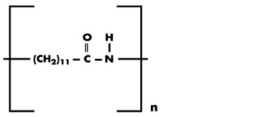
Polyvinylidene Fluoride

T_m: 155° to 185°C T_g: -30° to -20°C



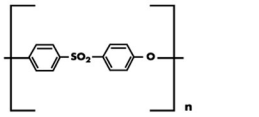
Nylon 12

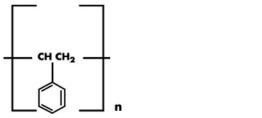
T_m: 160° to 210°C



Polyethersulfone

T_g: 220° to 230°C



Polystyrene

T_g: 90° to 110°C