

Physical Properties of Plastics

These icons provide a quick guide as to the chemical resistance of the polymers and can be found throughout the catalogue where appropriate.



Moderate resistance to common aqueous laboratory chemicals, but avoid organic solvents, strong acids and bases



Excellent resistance to most laboratory chemicals



Good general resistance to a range of laboratory chemicals including acids, bases and some solvents



Can be subjected to autoclaving at 121°C without damage to the polymer.

Please note - where no resistance icon is shown, this product is made from several materials. In this instance please refer to the chemical resistance/physical properties chart for each polymer.

Polypropylene, PP

- Translucent rigid polymer
- Temperature range -20 to +135°C
- Autoclavable at 121°C
- Good to excellent chemical resistance
- Resistant to fatigue making it tough
- Typically used for beakers, bottles and cylinders



Polytetrafluoroethylene, PTFE

- Opaque rigid polymer
- Wide temperature range -200 to +260°C
- Autoclavable at 121°C
- Unrivalled resistance to almost all chemicals
- Extremely low friction coefficient
- Typically used for bottles, beakers and stirrers



Low Density Polyethylene, LDPE

- Translucent flexible polymer
- Narrow temperature range of -50 to +80°C
- Not autoclavable at 121°C
- Good to excellent chemical resistance
- Robust and virtually unbreakable
- Typically used for wash bottles



Polymethylmethacrylate, Acrylic (PMMA)

- Transparent rigid polymer
- Narrow temperature range -60 to +50°C
- Not autoclavable at 121°C
- Moderate chemical resistance
- Very tough and high clarity
- Typically used for radiation shields



High Density Polyethylene, HDPE

- Translucent rigid polymer
- Broad temperature range of -100 to +120°C
- Not autoclavable at 121°C
- Good to excellent chemical resistance
- High tensile strength making it very tough
- Typically used for bottles



Polystyrene, PS

- Transparent rigid polymer
- Narrow temperature range -40 to +90°C
- Not autoclavable at 121°C
- Moderate chemical resistance
- Brittle yet has excellent clarity
- Typically used for container ware



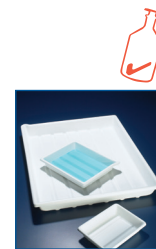
Polymethylpentene, PMP (TPX)

- Transparent rigid polymer
- Broad temperature range -180 to +145°C
- Autoclavable at 121°C
- Good to excellent chemical resistance
- Has a low density and a high clarity
- Typically used for beakers and cylinders



Polyvinylchloride, PVC

- Rigid polymer
- Narrow temperature range -25 to +70°C
- Not autoclavable at 121°C
- Moderate chemical resistance
- Rigid or flexible, coloured or clear
- Typically used for trays and troughs



Polycarbonate, PC

- Transparent rigid polymer
- Broad temperature range -135 to +135°C
- Autoclavable at 121°C
- Moderate chemical resistance
- High impact strength
- Typically used for safety shields



Polybutylene terephthalate, PBT

- Opaque rigid polymer
- Wide temperature range -40°C to +180°C
- Autoclavable at 121°C
- Mechanically strong engineering polymer
- Good resistance to chemicals
- Typically used for screw caps and connectors

