PETE (PET)

Polyethylene Terephthalate

1
PETE

Chemical Composition: $(C_{10}H_8O_4)_n$
Physical Properties: Lightweight, strong, resistant to impact, excellent gas and moisture barrier properties.
Softening Point: 55°C
Melting Point: 260°C
Colour: Naturally clear, can be dyed.
Common Uses: Beverage bottles, food containers, polyester fibers (clothing), microwave food trays.

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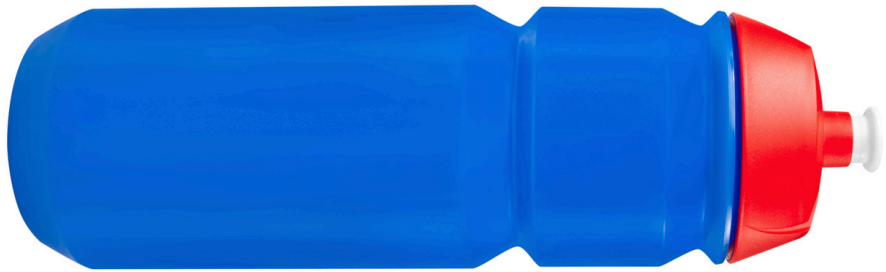
HDPE

High Density Polyethylene

2
HDPE

Chemical Composition:$(C_2H_4)_n$
Physical Properties: Strong, lightweight, resistant to temperature, moisture, gas and chemicals. High density
Softening Point: 60°C
Melting Point: 130–137°C
Colour: Translucent white or opaque. Can be dyed a wide range of colours.
Common Uses: Milk jugs, detergent bottles, piping, plastic bags, and playground equipment.



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PVC

Polyvinyl Chloride

Chemical Composition: (C2H3Cl)n
Physical Properties: Rigid or flexible, durable, resistant to chemicals and weathering. Very dense comparitively.
Softening Point: 70°C
Melting Point: 100-260°C depending on additives.
Colour: Naturally translucent, can be dyed.
Common Uses: Pipes, inflatable pools, flooring, medical devices, credit cards.

LDPE

Low Density Polyethylene

Chemical Composition:(C2H4)n
Physical Properties: Very flexible, lightweight, resistant to chemicals and moisture.
Softening Point: 40°C
Melting Point: 105–115°C
Colour: Translucent or opaque. Can be dyed.
Common Uses: Plastic bags, food wraps, squeeze bottles, tubing, and container lids.

PP

Polypropylene

Chemical Composition: $(C_3H_6)_n$
Physical Properties: Lightweight, rigid, resistant to fatigue, moisture, and chemicals.
Softening Point: 80°C
Melting Point: 130–171°C
Colour: Naturally translucent, can be dyed.
Common Uses: Food containers, automotive parts, textiles (e.g., rugs), and medical equipment.

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PS

Polystyrene

Chemical Composition: $(C_8H_8)_n$
Physical Properties: Rigid, brittle, good insulator. Foamed for lightweight applications.
Softening Point: 85°C
Melting Point: 240°C
Colour: Naturally clear, can be coloured. Opaque when foamed.
Common Uses: Disposable cups and plates, packaging materials (e.g., foam peanuts), insulation, and model kits.

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Other

Various other polymers

7
OTHER

Chemical Composition: A wide range of polymers including acrylic, nylon, polycarbonates and resins.
Physical Properties: Lightweight, rigid, resistant to fatigue, moisture, and chemicals.
Melting Point: Often much higher than other polymers, e.g. Polycarbonate 225 - 260°C
Common Uses: Industry specific applications including adhesives, mechanical parts and electronics.

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PLA

Polylactic Acid

7
PLA

Chemical Composition: $(C_3H_4O_2)_n$
Physical Properties: Rigid but brittle under stress. Biodegradable under correct conditions.
Softening Point: 60-65°C
Melting Point: 150-160°C
Colour: Naturally clear, can be coloured.
Common Uses: Compostable cups, plates and utensils.

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