

HIPS

(high impact polystyrene)

HIPS is a low cost plastic material that is easy to machine and fabricate. HIPS is often specified for low strength structural applications when impact resistance, machinability, and low cost are required. It is frequently used machining pre-production prototypes since it has excellent dimensional stability and is easy to fabricate, paint and glue. Natural (translucent white) HIPS is **FDA compliant** for use in food processing applications.

The following physical property information is based on typical values of the base high impact polystyrene resin.

| | Units | ASTM Test | Result |
|----------------------------------|-----------|-----------|----------------------|
| Mechanical | | | |
| Flexural Modulus | psi | D790 | 277,000 |
| Flexural Strength @yield | psi | D790 | 6,200 |
| Hardness-Rockwell | — | D785 | R95, L60 |
| Gardener Impact @73°F | in•lb | D3029 | 160 |
| Izod Impact Strength | | | |
| Notched @73°F | ft•lbs/in | D256 | 2.1 |
| Notched @0°F | ft•lbs/in | D256 | 1.2 |
| Tensile Elongation @break | % | D638 | 52.0 |
| Tensile Modulus | psi | D638 | 239,000 |
| Tensile Strength | | | |
| @break | psi | D638 | 3,500 |
| @yield | psi | D638 | 2,800 |
| Thermal | | | |
| Coefficient of Thermal Expansion | in/in/°F | D696 | 5.0x10 ⁻⁵ |
| Flammability Rating—UL94 @.058" | — | — | HB |
| Heat Deflection Temperature | | | |
| @66 psi | °F | D648 | 189 |
| @264 psi | °F | D648 | 165 |
| Other | | | |
| Specific Gravity | — | D792 | 1.04 |

Westlake Product Bulletin



HIPS prototype showerheads

Applications Include:

- Machined prototypes
- Low-strength structural components
- Housings
- Covers

Advantages of HIPS:

- Good impact resistance
- Excellent machinability
- Good dimensional stability
- Excellent aesthetic qualities
- Easy to paint and glue
- Low cost
- FDA compliant

Manufacturing Capabilities:

Rod: 1/4" to 8" diameter

Sheet: 1/8" to 4" thick

Colors/Grades:

Translucent white.
(custom colors available)

*In addition to our standard capabilities, Westlake also has the ability to process custom resins in various sizes and colors with some exceptions.

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