

HIGH DENSITY POLYETHYLENE (H.D.P.E)

TYPICAL PHYSICAL PROPERTIES

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|------------------|-------|-------------------|
| Specific Gravity | 0.99 | g/cm ³ |
| Fire Behaviour | H.B. | UL94 |
| Water Absorption | <0.01 | DIN 53495 |

MECHANICAL

| | | |
|---------------------------|---------------------------------|-----------|
| Yield Strength | 25 N/mm ² | DIN 53455 |
| Elongation at Yield | 8.5 % | DIN 53455 |
| Tensile Strength at Break | 6 N/mm ² | DIN 53455 |
| Elongation at Break | 80 % | DIN 53455 |
| Tensile Modulus | 0.6 – 1.8 x 10 ⁵ psi | D 638 |
| Flexural Modulus | 1.0 – 2.0 x 10 ⁵ psi | D 790 |
| Hardness, Rockwell R | 65 | D 785 |

THERMAL

| | | |
|--|-------------|-------|
| Thermal Conductivity (10 ⁻⁴ cal-cm/sec-cm ² -°C) | 11.0 – 12.4 | C 177 |
| Coefficient of thermal expansion (10 ⁻⁵ in/in-°F) | 6.1 – 7.2 | D 696 |
| Deflection Temperature (°F) @ 264 psi | 110 - 130 | D 648 |
| @ 66 psi | 140 - 190 | |

ELECTRICAL

| | | |
|---|------------|-------|
| Dielectric strength (V/mil) Short Time, 1/8 -in thk | 450 - 500 | D 149 |
| Dielectric constant A 1kHz | 2.3 – 2.35 | D 150 |
| Dissipation factor @ 1kHz | 0.0003 | D 150 |

This information is intended as a guideline for designers and processors of thermoplastics. Because design and processing is complex, a set solution will not solve all problems. Observation on a "trial and error" basis may be required to achieve desired results.