



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

### TYPICAL PHYSICAL PROPERTIES

Specific Gravity	0.99	c/cm <sup>3</sup>
Fire Behaviour	H.B.	UL94
Water Absorption	<0.01	DIN 53495

### MECHANICAL

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

### THERMAL

Thermal Conductivity (10 <sup>-4</sup> cal-cm/sec-cm <sup>2</sup> -°C)	11.0 – 12.4	C 177
Coefficient of thermal expansion (10 <sup>-5</sup> 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.

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