

# Material Properties

## ENGRAVABLE PLASTICS

### Material Name: Exterior Series: Hardwear Plus

Properties:	Typical Values	ASTM Method
<b>Tensile Strength:</b>		
To break:	4,200 psi	D-638
Elongation before break:	50%	D-638
<b>Flexural Strength:</b>		
Load to stretch outer surface 5%	8,000 psi	D-790
<b>Gravity:</b>	1.05	D-792
<b>Rockwell Hardness:</b>	R108, M80	D-785
<b>IZOD Impact Strength</b>		
Notched at 73°F (22.777°C)	2.5 ft lbs/in	D-256
Notched at 32°F (0°C)	1.6 ft lbs/in	D-256
<b>Deflection Temperature</b>		
Temperature at which material deflects .010" (.254mm) at 264 psi	205°F (96.11°C)	D-648
<b>Coefficient of Thermal Expansion</b>		
Inch/inch/°F	3.8 x 10 <sup>-5</sup>	D-696

*Exterior Series: Hardwear Plus softens at about 200°F (93.33°C) sufficiently so that it can be drilled, sawed, sheared, nailed, bonded and die-cut.*

*The base material was tested for flammability by the Underwriters Laboratories. The material is rated 94 HB on the UL 94 test.*



INNOVATIVE PLASTICS INC.

P.O. Box 7065 | Algonquin, IL 60142  
 Fax: 815 477 1210 | email: IPI@mc.net  
 www.inoplas.com

*All IPI products are available only through your Authorized IPI distributor.*

*Visit [www.inoplas.com](http://www.inoplas.com) to locate a distributor in your area.*