



Description: UHMW is ultra high molecular weight polyethylene. UHMW is lightweight and longwearing, providing excellent performance in numerous applications requiring impact and abrasion resistance, non-stick properties or noise reduction. UHMW imparts no undesirable taste, smell, or discoloration. This material requires no special care and can be cleaned with water, steam, detergents, or disinfectants. Key benefits include abrasion and impact resistance. The low coefficient of friction allows it to release food particles and other substances, preventing build-ups and bottlenecks. It is chemically inert, self-lubricating, FDA/USDA approved, and machinable and performs well in extreme low temperatures.

Thermal and Mechanical Properties:

| | | |
|--|-------|----------------------|
| Density (<i>g/cm³</i>) | | |
| ASTM | D1505 | .930 |
| Tensile Properties | | |
| Maximum Strength (PSI) | | |
| ASTM | D638 | >2,800 |
| Elongation at Break (%) | D638 | >450 |
| Flexural Modulus (PSI) | | |
| ASTM | D790 | 160,000 |
| Durometer, Shore D | | |
| ASTM | D2240 | 62 |
| Izod Impact Strength J/M | | |
| ASTM | D256 | No Break |
| Brittleness Temp. °C | | |
| ASTM | D746 | <-38 |
| Vicat Softening Point °C | | |
| ASTM | D1525 | 128 |
| Heat Deflection Temp. 66PSI °C | | |
| ASTM | D648 | 82 |
| Coefficient of Linear Thermal Expansion (<i>in/in/degrees F</i>) | | |
| ASTM | D696 | 1.1x10 ⁻⁴ |

| | |
|--------------------|--|
| Material | Sand Slurry Test (Relative Volumetric Abrasion) |
| King Hy-Pact® UHMW | 12 |
| King Hy-Pact® VH | 40 |
| HDPE | 110 |

*Tested in a 50/50 mix of sand/water slurry for 8 hours at 1700 RPM.

The values quoted are typical lab results and must not be regarded as supply specification.

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TAP Plastics Corporate Office • 3011 Alvarado Street, Suite A • San Leandro, CA 94577 • (510) 895-8249 • Fax (510) 895-9613
15 TAP stores in Northern California • 2 in Oregon • 3 in Washington
For the location nearest you go to tapplastics.com