

# UHMW

## Ultra-High Molecular Weight Polyethylene UHMW-PE, IPX®



### Description and Overview

UHMW is a tough, wear resistant mechanical plastic that combines an incredibly low coefficient of friction with outstanding impact strength at low temperatures, ideal for reducing wear and friction in many industrial and mechanical parts. This durable polymer features excellent chemical and abrasion resistance and functions well within a broad temperature range.

UHMW replaces metal in many applications and is the material of choice for conveyor systems and guard rails. Virgin UHMW has been approved by the Food and Drug Administration for safe food contact.

### Applications and Uses

UHMW is utilized in commercial and industrial equipment and parts. It is used for automotive, lumber, material handling, assembly line, food processing, as well as packaging and transportation industries.

- Gears, bearings, sprockets
- Conveyor guard rails
- Wear strips
- Bump stops
- Belt scrapers, belt cleaners
- Rider plates for assembly lines, guide shoes
- Machining components
- Truck bed liners, chute liners
- Dock fenders and panels
- Chain guides, wheels, components parts
- Pinion gears, flanged rollers, idler rollers
- Waste-water treatment products

UHMW is available in virgin, reprocessed, anti-static & other specialty grades including IPX® advanced wear sheet.

Full Sheet: 48"x120" (.060" through 12" thick)  
Rod: (0.25" through 12.0" diameter)

### Properties and Specifications

| Property   | UHMW-PE       |
|--|---------------|
| Density (lbs/in. <sup>3</sup>   lbs/ft. <sup>3</sup> ) | 0.0335   57.9 |
| Tensile Yield Strength (psi)                           | 3100          |
| Elongation @ Break                                     | 350%          |
| Coefficient of Friction (on steel, static)             | .15 - .20     |
| Coefficient of Friction (on steel, dynamic)            | .10 - .20     |
| Continuous Service Temperature                         | 180° F        |
| Hardness, Shore D                                      | 62-66         |
| Melting Point  | 275° F        |
| Moisture Absorption @ Saturation                       | 0.01%         |
| Coefficient of Friction                                | 0.14          |
| Affixable Properties                                   | Mech          |

Properties are typical.  
Chem is an abbreviation for chemically affixed with glues, chemicals or adhesives.  
Mech is an abbreviation for mechanically affixed bonding.  
Field testing is recommended for any application.

Rev 2 (11/10/15)

330 Commerce Circle  
Sacramento, CA 95815  
(888) 768-5759



www.interstateplastics.com