

Lennite® UHMW-PE

(ultra high molecular weight polyethylene)

Lennite UHMW-PE is a low friction engineering plastic with excellent chemical resistance and abrasive wear resistance. Lennite is widely used in conveyors, packaging machinery, and food processing machinery since it is inherently low friction, wears well, and is not abrasive to mating parts. Westlake Plastics manufactures Lennite with extremely low levels of residual stress so that it can be machined into complex parts with minimal deformation. It is often used to line or replace abrasion-resistant steel plate in bulk material handling applications when low friction, corrosion resistance, and excellent wear properties are essential. Natural (white) Lennite is **FDA compliant** for use in food processing machinery.

The following physical property information is based on typical values of the base ultra-high molecular weight polyethylene resin.

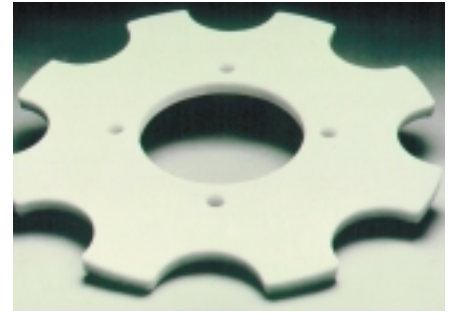
	Units	ASTM Test	Result
Mechanical			
Hardness-Shore D	—	D2240	D61
Izod Impact Strength			
Double 15° Notch @73°F	ft•lbs/in	D256	18
Tensile Elongation			
@break	%	D638	>350.0
@yield	%	D638	—
Tensile Strength			
@break	psi	D638	6,000
@yield	psi	D638	2,800
Thermal			
Coefficient of Thermal Expansion	in/in/°F	D696	11.0x10 ⁻⁵
Heat Deflection Temperature @66 psi	°F	D648	203
Electrical			
Dielectric Constant @60Hz	—	D150	2.30
Dielectric Strength	kv/cm	D149	900
Dissipation Factor			
@50Hz	—	D150	0.00019
@100kHz	—	D150	0.00025
Volume Resistivity	ohm•cm	D257	>10 ¹⁶
Other			
Specific Gravity	—	D792	0.930
Water Absorption @24 hours	%	D570	Nil

WESTLAKE
PLASTICS COMPANY

World Headquarters
P.O. Box 127, Lenni, PA 19052
1-800-999-1700 • Fax: (610) 459-1084

www.westlakeplastics.com

Westlake Product Bulletin



Lennite Star Wheel

Industry Applications Include:

- Packaging and food processing machinery components
- Star wheels and guide rails
- Idler sprockets
- Timing screws
- Hopper, chute, truck bed, and railcar liners
- Conveyor components
- Bearings and bushings
- Under-chain wear strips

Advantages of Lennite:

- Excellent abrasive wear resistance
- Low friction
- Promotes the flow of bulk material (sand, soy beans, coals, etc.)
- Low moisture absorption
- High impact strength – even at cold temperatures
- Excellent chemical resistance
- FDA and USDA compliant (natural only), 3A Dairy, NSF Standards 51, 61 on specific resins
- Low cost

Manufacturing Capabilities:

Sheet: 1/8" to 6" thick
Tube: 1 1/8" to 3 1/2" O.D.

Colors/Grades:

Lennite – FDA compliant (natural)
Lennite II – non-FDA (natural, gray and black)
Custom colors available in both FDA compliant and non-FDA grades.

*In addition to our standard capabilities, Westlake also has the ability to process custom resins in various sizes and colors with some exceptions.

West Coast Office
377 E. Chapman Ave., Suite 120, Placentia, CA 92870
1-800-440-0597 • Fax: (714) 961-0978

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