





P: 1.800.999.1700 | F: 610.459.1084 | info@westlakeplastics.com | 490 West Lenni Road, Lenni, PA 19052 U.S.A.

Thermalux® PPSU



Thermalux® Polyphenylsulfone (PPSU) is a transparent and rigid high-temperature engineering thermoplastic and belongs to the sulfone family of polymers. It is known for its extreme toughness, high flexural and tensile strength, excellent hydrolytic stability and good resistance to chemicals and heat.

INDUSTRY







COLORS AVAILABLE





ATTRIBUTES



SHAPES

| Extruded Slab | |
|----------------|----------|
| Extruded Sheet | ⊘ |
| Extruded Film | ⊘ |
| Extruded Rod | ⊘ |
| | |







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TYPICAL PROPERTIES

| PROPERTY | TEST STANDARD | ENGLISH UNITS | METRIC UNITS |
|----------------------------------|---------------|-----------------------------|-----------------------------|
| Mechanical | | | |
| Flexural Modulus | D790 | 349 kpsi | 2,410 MPa |
| Flexural Strength - 5% | D790 | 13, kpsi | 91 MPa |
| Izod Impact Resistance - Notched | D256 | 12.92 ft-lb/in | 690 J/m |
| Tensile Elongation @ Break | D638 | 60-120% | 60-120% |
| Tensile Elongation @ Yield | D638 | 7.20 % | 7.20 % |
| Tensile Modulus | D638 | 339 kpsi | 2,340 MPa |
| Tensile Strength @ Break | D638 | 10 kpsi | 69 MPa |
| Thermal | | | |
| HDT @ 264 psi | D648 | 404 °F | 207 °C |
| Physical | | | |
| Moisture Absorption | D570 | 0.37 % | 0.37 % |
| Specific Gravity | D792 | 1.29 | 1.29 |
| Electrical | | | |
| Volume Resistivity | D257 | 1 x 10 ¹⁵ ohm-cm | 1 x 10 ¹⁵ ohm-cm |

^{*}Data above is based on testing of injection molded test specimens







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PRODUCT SHAPES & DIMENSIONS

| 2.25" (57.15mm) | 2.5" (63.5mm) | 2.75" (69.85mm) | 3" (76.2mm) | 3.25" (82.55mm) | 3.5" (88.9mm) |
|-----------------|---------------|-----------------|-------------|-----------------|---------------|
| 3.75" (95.25mm) | 4" (101.6mm) | | | | |

Rods: 96"L (244cm)

Rods: 48"L (122cm)

| 0.5" (12.7mm) | 0.75" (19.05mm) | 1" (25.4mm) | 1.25" (31.75mm) | 1.5" (38.1mm) | 1.75" (44.45mm) |
|-----------------|-------------------|---------------|-------------------|-----------------|-------------------|
| 0.5 (12.711111) | 0.75 (17.0511111) | 1 (23.411111) | 1.25 (31.7511111) | 1.5 (56.111111) | 1.75 (44.4511111) |

2" (50.8mm)

Extruded Slabs: 24"W (61cm)

| 0.5" (12.7mm) | 0.75" (19.05mm) | 1" (25.4mm) | 1.25" (31.75mm) | 1.5" (38.1mm) | 1.75" (44.45mm) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------|
| 2" (50.8mm) | 2.25" (57.15mm) | 2.5" (63.5mm) | 2.75" (69.85mm) | 3" (76.2mm) | 3.25" (82.55mm) |
| 3.5" (88.9mm) | 3.75" (95.25mm) | 4" (101.6mm) | | | |

Extruded Sheets: 48"W x 96"L (122cm x 244cm)

| 0.03" (0.76mm) | 0.035" (0.89mm) | 0.06" (1.52mm) | 0.062" (1.57mm) | 0.08" (2.03mm) | 0.09" (2.29mm) |
|-----------------|-----------------|------------------|-----------------|----------------|----------------|
| 0.095" (2.41mm) | 0.125" (3.18mm) | 0.1875" (4.76mm) | 0.25" (6.35mm) | | |

Extruded Films: 26"W (66cm)

| 0.002" (0.05mm) 0.003" (0.08mm) 0.004" (0.1mm) 0.005" (0.13mm) | 0.01" (0.25mm) | 0.02" (0.51mm) |
|--|----------------|----------------|
|--|----------------|----------------|

LAST REVISED: 01/05/2024

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