

Static Control Propylux®

(static control polypropylene)

PROPYLUX® SD-A (Static-dissipative Polypropylene) Non-carbon-filled, permanently static-dissipative material, with good chemical resistance and mechanical properties. This material is light weight, weldable, easily machined and fabricated, available in natural or black color, and has moderate transparency at thinner gauges.

PROPYLUX® CN-P (Conductive Polypropylene) Carbon-powder-filled lightweight material with good chemical resistance, extremely low water absorption level, and high impact resistance (no break, notched or unnotched).

PROPYLUX® CN-F (Conductive Polypropylene) Non-sloughing, carbon-fiber-filled material with good chemical resistance, high strength and stiffness, and good temperature resistance to 215° F. This material is light weight, easily machined and fabricated, and has good overall mechanical properties.

PROPYLUX® SD-X7 is a new static control material employing unique proprietary technologies. As a result, Propylux SD-X7 products exhibit consistent surface resistivities in the 10⁹ to 10⁹ range. While other products with similar resistivity values contain 10% to 20% carbon black, Propylux SD-X7 technology allows for low carbon concentrations between 1% to 2%. With this lower carbon loading, contamination problems resulting from sloughing are greatly reduced making Propylux SD-X7 clean room compatible. Other features of this technology are low leachable ion levels and low outgassing.

The following physical property information is based on typical values of the resin.

	Units	ASTM Test	Propylux SD-A	Propylux CN-P	Propylux CN-F	Propylux SD-X7
Mechanical						
Tensile strength @yield	psi	D638	4,400	3,000	9,500	6,500
Tensile elongation @break	%	D638	200.0	15.0	2.5	2.0
Flexural strength	psi	D790	6,200	4,000	11,000	-
Flexural modulus	psi	D790	200,000	140,000	750,000	450,000
Izod impact strength						
Notched	ft•lbs/in	D256	1.4	3.5	1.1	0.94
Un-Notched	ft•lbs/in	D256	No Break	17.5	4.5	6.8
Hardness-Shore D		D2240	72	-	63	-
Thermal						
Heat deflection temperature						
@264 psi	°F	D648	135	130	250	300
@66 psi	°F	D648	227	-	-	-
Flammability rating-UL94			HB	HB	HB	HB
Electrical						
Surface resistivity dry	ohm/sq	D257	10 ⁹ - 10 ¹¹	10 ² - 10 ⁶	10 ² - 10 ⁶	10 ⁶ - 10 ⁹
Volume resistivity dry	ohm/cm	D257	10 ⁹ - 10 ¹¹	10 ² - 10 ⁶	10 ² - 10 ⁶	10 ⁶ - 10 ⁹
Static decay	seconds	Mil-B-81705-B	<0.3	<0.1	<0.1	-
Other						
Specific gravity		D792	0.94	0.96	0.98	1.01
Water absorption @24 hours	%	D570	1.00	0.01	0.01	0.03

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Applications Include:

- Semiconductor/electronic components
- Automotive assembly equipment
- Business machine manufacturing components
- Explosives handling equipment

Advantages of Propylux SD-A, CN-P and CN-F:

- Very good chemical resistance
- Easily machined
- Cost effective
- Durable
- Lightweight
- Weldable

Manufacturing Capabilities:

Rod: 1/8" to 4" diameter

Sheet: .030" to 4" thick

Film(SD-A & CN-P only): .010" to .029" thick

Colors/Grades:

SD-A—Natural (urethane yellow)

SD-A—Black

CN-P—Black

CN-F—Black

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



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