

Static Control Zelux®

(static control polycarbonate)

ZELUX® SD-P (Static-dissipative Polycarbonate) Carbon-powder-filled material with resistivity levels in the $10^7 - 10^{11}$ range with high flexural strength and good thermal stability to 270° F. UL94 V-O rated at .030", this material is thermoformable in .010" - .060" gauges, and has low outgassing properties.

ZELUX® CN-P and CN-SS (Conductive Polycarbonate) The CN-P material is carbon-powder-filled, while the CN-SS is filled with small non-sloughing stainless steel fibers. Both have high flexural strength and good thermal stability to 275° F. The CN-SS material has excellent impact strength, while the CN-P is UL94 V-O rated at .030" and is thermoformable in thinner gauges (.010" - .060").

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

	Units	ASTM Test	Zelux SD-P	Zelux CN-P	Zelux CN-SS
Mechanical					
Tensile strength @yield	psi	D638	9,500	9,400	7,500
Tensile elongation @break	%	D638	5.0	5.0	15.0
Flexural strength	psi	D790	15,500	15,500	12,000
Flexural modulus	psi	D790	450,000	460,000	350,000
Izod impact strength					
Notched	ft•lbs/in	D256	1.5	1.4	1.8
Un-Notched	ft•lbs/in	D256	15.0	10.0	30.0
Hardness-Shore D		D2240	78	62	-
Thermal					
Heat deflection temperature					
@264 psi	°F	D648	270	270	285
Flammability rating-UL94			V-0 @0.020"	V-0 @0.028"	V-0 @0.065"
Coefficient of thermal expansion	in/in/°F	D696	3.5×10^{-5}	-	-
Thermal conductivity	(BTU•in)/(hr•ft ² •°F)	-	1.6	-	-
Electrical					
Surface resistivity dry	ohm/sq	D257	$10^7 - 10^{11}$	$10^3 - 10^6$	$10^2 - 10^6$
Volume resistivity dry	ohm/cm	D257	$10^7 - 10^{11}$	$10^3 - 10^6$	$10^2 - 10^6$
Static decay	seconds	Mil-B-81705-B	<0.1	<0.1	<0.1
Other					
Specific gravity		D792	1.33	1.32	1.29
Water absorption @24 hours	%	D570	0.18	0.16	0.13



Applications Include:

- Semiconductor/electronic components
- Cassette housings
- Telecommunications hardware
- Explosives handling equipment

Advantages of Zelux SD-P, CN-P and CN-SS:

- Consistent resistivity values
- Low outgassing
- UL 94 V-0 flame rating
- High strength
- Easily machined
- Durable

Manufacturing Capabilities:

- Rod**(SD-P & CN-P only): 1/8" to 4" diameter
- Sheet**(SD-P & CN-P): .030" to 4" thick
- Sheet**(CN-SS): 3/8" to 4" thick
- Film**(SD-P & CN-P only): .010" to .029" thick

Colors/Grades:

- SD-P—Black
- CN-P—Black
- CN-SS—Dark Gray

*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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