

Static Dissipative Acrylic for ESD and Cleanroom Applications

Typical Physical Properties (Typical but not guaranteed values for 0.25 inch material)

Property	Test Method	Units	AC-300 Acrylic
Physical			
Specific Gravity Pencil Hardness	ASTM D-792 ASTM D-3363	- Hardness Scale	1.19 SH
Mechanical			
Tensile Strength Ultimate	ASTM D-638	psi	10,000
Elongation	ASTM D-638	%	4.5
Tensile Modulus	ASTM D-638	psi	400,000
Flexural Strength	ASTM D-790	psi	16,500
Flexural Modulus	ASTM D-790	psi	475,000
Compressive Strength	ASTM D-695	psi	18,000
Izod Impact Strength (milled notch)	ASTM D-256	ft-lb/inch of notch	0.4
Thermal			
Deflection Temperature (264 psi load)	ASTM D-648	°F	205
Vicat Softening Point	ASTM D-1525	°F	239
Maximum Continuous Service Temperature	-	°F	170
Coefficient of Thermal Expansion	ASTM D-696	in/in/°F	4.0 x 10 ⁻⁵
Coefficient of Thermal Conductivity	Cenco-Fitch	BTU/hr-ft ² F/in	1.3
Flammability			
Horizontal Burn (Flame Spread)	ASTM D-635	in/min	1.1
UL Rating	UL Classification	UL94	94HB
Optical			
3mm Transparent Clear Transmittance-Total	ASTM D-1003	%	79
Haze	ASTM D-1003	%	Less Than 4.0
Electrical			
Surface Resistivity Electrostatic Decay	ASTM D-257 FTS 101C, Method 4046.1*	ohms/sq. sec	10 ⁶ -10 ⁸ Less than 0.05

*Federal Test Standard 101C, Method 4046.1 as described in EIA-541, Appendix F, Measurement of Electrostatic Decay Properties of Dissipative Planar Materials.

Chemical Resistance ASTM D-543

Samples immersed in the specified chemicals for 24 hours at room temperature and visually examined.

Chemical	Surface Attack	Visual Evaluation
Deionized Water	None	Clear
30% Sodium Hydroxide	None	Clear
30% Sulfuric Acid	None	Clear
30% Nitric Acid	Slight Pitting	Clear
48% Hydrofluoric Acid	Severe Attack	White, Rubbery
Methanol	Slight	Hazy
Ehanol	None	Clear
Isopropyl Alcohol	None	Clear
Acetone	Severe Pitting	Clear
Methylene Chloride	Sample Dissolved	Sample Dissolved

Features and Benefits

- Cannot be tribocharged when properly grounded. Prevents build up of static charge and accumulation of harmful contamination.
- Electrostatic decay in less than 0.05 second per Federal Test Standard 101C, Method 4046.1 Results in rapid static dissipation without arcing.
- Surface resistivity 10^6 - 10^8 ohms per square. Provides for ESD control in a wide range of applications.
- Permanence in static dissipation performance. Avoids high maintenance cost of periodic application of temporary topical anti-stats.
- Amine free, humidity independent and does not outgas under normal operating conditions.
- Excellent optical properties. C-300 surface provides excellent clarity for optimum use of available light.
- Superior chemical resistance. Reduces risk of solvent and chemical damage to the static dissipative surface.

PRECAUTIONS:

1. *Acrylic plastic is a combustible thermoplastic. Avoid exposure to flame and excessive heat. Observe fire precautions appropriate for comparable forms of wood and paper.*
2. *Clean with soap and water. Do not use abrasives. Avoid inappropriate contact with solvents.*