



## Licron Crystal ESD-Safe Coating Product# 1756

### Product Description

Licron Crystal™ is a revolutionary and innovative concept in permanent static dissipative coatings. It provides excellent adhesion to metals, glass, plastics, paints and most other surfaces. Licron Crystal operates from 0-100% humidity. The cured coating is durable, will not chip and maintains  $10^7$ - $10^9$  ohms resistivity. Licron Crystal is crystal clear, unlike other static dissipative coatings (including the original Licron) that are translucent.

Licron Crystal can be sprayed using standard spray guns or paint systems (test compatibility on seals and other plastic or rubber components). As long as the coat is smooth and even, the finish is absolutely clear and glossy. A grounding wire can then be attached (i.e. by conductive adhesive) similar to an ESD floor.

### Features / Benefits

- Rugged static dissipative coating
- Surface Resistivity of  $10^6$  To  $10^9$  ohms
- Operating temperature range up to 302°F (155°C)
- Humidity independent
- Superior adhesion to variety of surfaces: glass, plastic, etc.
- Coverage - 1 gallon @ 1 mil wet film will cover ~1600 sq. ft., @ 2 mil ~800 sq. ft.
- Non-ozone depleting

### Applications

- Electronic Assembly Work Stations, Bins, Carts, and Trays
- Electronic Assembly Work Enclosures, Including Plexi-Glass
- Packaging for Sensitive Components
- Production Conveyors & Bumpers
- Static Protection for Electronic Devices

### Usage Instructions

Surface to be coated should be dry and free of dirt, grease, and oils. Can and surface should be at room temperature. Shake can vigorously prior to spraying and re-shake occasionally during extended applications. Hold can 8-10 inches from surface. One to two light passes results in a clear coat within the resistivity range. Heavy application or spraying when humidity is over 50% RH may result in hazy coat. Allow to dry 24 hours at room temperature (70°F/21°C) for full cure. Accelerate cure by placing in oven at 120°-150°F for 1-2 hours. To ensure material compatibility, test on inconspicuous area before general use.



### Typical Product Data and Physical Properties

<b>Physical state:</b>	Liquid
<b>Flash point:</b>	Closed cup: 53.2°F (11.7°C)
<b>Auto-ignition temperature:</b>	852.8°F (456°C)
<b>Flammable limits:</b>	Lower 2% Upper 12%
<b>Color:</b>	Colorless
<b>Odor:</b>	Alcohol-like
<b>pH:</b>	8.5
<b>Boiling/condensation point:</b>	181.4°F (83°C)
<b>Melting/freezing point:</b>	-130°F (-90°C)
<b>Relative density:</b>	0.79
<b>Vapor pressure:</b>	4.4 kPa (33 mmHg)
<b>Vapor density:</b>	2.1 [Air=1]
<b>Evaporation rate:</b>	<1 (Water=1)
<b>Shelf life:</b>	5 years unopened

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### Test Data

#### Chemical Resistivity/Compatibility Test

Coating = 2 mil wet (~0.2 mil dry) on PMMA. 1 drop/time/30-sec DI rinse

MATERIAL	1-Minutes Results	5- Minutes Results	10- Minutes Results
DI Water (control)	None	None	None
70% IPA	Light haze, coating intact	Haze, coating intact	Discoloration, coating intact
50% Ethanol	Light haze, coating intact	Haze, coating intact	Discoloration, coating intact
1:1 Clorox	None	None	None
Dowanol DPM	Haze, coating intact	Partial dissolution	Total dissolution
Tetrahydrofuran (THF)	Haze, light crazed coating	Haze, coating intact	Bleached, crazed coating
n-propyl acetate	Haze, coating intact	Slight dissolution	Slight dissolution
Parson's Sol'n (1.4% NH <sub>4</sub> OH)	None	None	None
5% Acetic acid	None	None	None
409 Pro	None	None	None
Pine-Sol Lemon	Very light haze, intact	Very light haze, intact	Slight haze, coating intact
Windex	Very light haze, intact	Very light haze, intact	Deep haze, coating intact
Coca-Cola	None	None	None
Mustard	None	None	None
Acetone	Haze, softened coating	Haze, softened coating	Softened, bubbled coating
d-Limonene	None	None	Slight haze, coating intact
Palmolive Ultra dish detergent	None	None	None

#### Substrate Compatibility Test

ASTM D3359 Mtd B Adhesion Test

Bulk coating = 2 mil wet (~0.2 MIL DRY), cured at RT 12 hrs & heat cured @ 65°C/5 min

Material	Testing Results
ABS smooth	4B
Nylon 6	5B
Nylon 6/6	4B
PC (Lexan)	5B
HDPE	5B
LDPE	4B
Phenolic CE	5B
PMMA	5B
POM	0B
PP	4B
PS	0B
PTFE	0B
PVC-P	4B
PVC-R	4B
Glass	4B

*Not recommended*

*Not recommended*

*Not recommended*

### Test Data (cont.)

#### Substrate Compatibility Test (cont.)

**Key**      **100 square 1mm grid**

0B	65%+
1B	Flaked along edges in large ribbons & whole squares, 35-65%
2B	Flaked along edges and parts of squares, 15-35%
3B	Small flakes are detached along edges and intersections, 5-15%
4B	Small flakes are detached at intersections, <5%
5B	No square of the lattice are detached

### Packaging and Availability

**1756-8S**      8 oz. Aerosol

**1756-G**      1 gallon liquid

### Environmental Policy

Techspray® is committed to developing products to ensure a safer and cleaner environment. We will continue to meet and sustain the regulations of all federal, state and local government agencies.

### Resources

Techspray® products are supported by global sales, technical and customer services resources.

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