



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

| | |
|------------------------------------|-----------------------------|
| Physical state: | Liquid |
| Flash point: | Closed cup: 53.2°F (11.7°C) |
| Auto-ignition temperature: | 852.8°F (456°C) |
| Flammable limits: | Lower 2% Upper 12% |
| Color: | Colorless |
| Odor: | Alcohol-like |
| pH: | 8.5 |
| Boiling/condensation point: | 181.4°F (83°C) |
| Melting/freezing point: | -130°F (-90°C) |
| Relative density: | 0.79 |
| Vapor pressure: | 4.4 kPa (33 mmHg) |
| Vapor density: | 2.1 [Air=1] |
| Evaporation rate: | <1 (Water=1) |
| Shelf life: | 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 ₄ 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.

For additional technical information on this product or other Techspray® products in the United States, call the technical sales department at 800-858-4043, email tsales@techspray.com or visit our web site at: www.techspray.com.

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