



Licron Crystal™

Permanent, Crystal Clear Static Dissipative Coating

1756

Introduction

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

- Crystal Clear
- Permanently Static Dissipative
- Surface Resistivity of 10^7 - 10^9 ohms
- Humidity Independent
- Superior Adhesion to Variety of Substrates: Glass, Plastic, etc.

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

Chemical Components

Component	CAS#
Water	7732-18-5
2-Propanol	200-661-0
1-Butanol.....	200-751-6
Dipropylene glycol methyl ether	252-104-2
3,4-polyethylenedioxythiophene-polystyrenesulfonate	155090-83-8
Polymer, Proprietary	
2,5,8,11-tetramethyl-6-dodecyn-5,8-diol ethoxylate	169117-72-0
Ethanol, 2, 2', 2''-nitrilotris	102-71-6
Gamma-glycidoxypropyltrimethoxysilane.....	2530-83-8
Methanol	67-56-1

Chemical Properties (MSDS available on request)

- PHYSICAL STATE: Liquid
- VISCOCITY: 11 cps (Brookfield Rotational)
- CURE TIME: (2 mil wet coat) cured at RT 24 hrs or heat cured @ 65°C/5 min
- HARDNESS OF CURED COAT: (2 mil wet coat) Gardner scale = HB
- ODOR: Alcohol odor
- COLOR: Dark blue.
- pH: 7.5 to 8.5
- PERCENT VOLATILE: 97.6
- BOILING POINT: 176°F
- SOLUBILITY IN WATER: Soluble
- EVAPORATION RATE: < 1 (H2O=1)
- DENSITY: 0.92 at 25°C
- (VOC): 402 g/L (non-exempt VOC)

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-MINUTE RESULTS	5-MINUTE RESULTS	10-MINUTE 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	None
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	<i>Not recommended</i>
PP	4B	
PS	0B	<i>Not recommended</i>
PTFE	0B	<i>Not recommended</i>
PVC-P	4B	
PVC-R	4B	
Glass	4B	

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

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.

Packaging and Availability

Licron Crystal available in the following sizes:

1756-G	1 Gal Plastic Jug
1756-5G	5 Gal Plastic Jug
1756-54G	54 Gal Plastic Drum

Resources

Techspray® products are supported by a 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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