



Electrodag ® EB-012

Product Data Sheet

Catalog Numbers: 60939, 60940, 60941, 60942

A Conductive, Chemical-Resistant Coating for Lithium Batteries

Description: Electrodag EB-012 is one in a series of conductive coatings designed to provide controlled electrical properties. It is a one-component, water based dispersion of graphite in a thermoplastic binder. It is designed to provide a conductive, chemical-resistant coating on most metals. When properly diluted, Electrodag EB-012 can be spray applied or printed and cured to form an adherent coating.

Advantages:

- Excellent adhesion to aluminum and copper
- Conductive protective coating on battery electrodes
- Tough, tenacious, chemical and solvent-resistant coating for metals
- Proven performance in polymer lithium-ion batteries

Typical Properties (as supplied)

Color	Black
Pigment	Graphite
Binder	Thermoplastic
Carrier	Water
Viscosity	50-200cps (5 min. roll @ 20rpm, RVT #2)
Density	9.1-9.5 lb/gal (1.09-1.13 kg/l)
Solids content by Weight	29% ± 0.5%
Flash Point	>212°F
VOC	10g/l
Theoretical Coverage	336 ft ² /gal @ 1 mil thickness

Typical Properties (cured coating)

Color	Black
pH	8.0 – 9.0
Sheet Resistance	<30 ohm/sq @ 1 mil dry film thickness

Application Details

Surface Preparation

Substrates must be dry and free of contaminants (dirt, grease, powder, other residues) before application of Electrodag EB-012. The etching process to prepare aluminum grids for coating is as follows:

1. Soak grid three minutes in 5% NaOH.
2. Rinse 30 seconds under tap water.
3. Soak 30 seconds in 1% HCl
4. Rinse 30 seconds under tap water.
5. Rinse with acetone to remove water.
6. Allow to dry before coating.

Application Details (continued)

Mixing/Blending/Dilution

Electrodag EB-012 is supplied ready for use, but an addition of up to 8 ounces of water can be added per gallon if needed. Thoroughly mix Electrodag EB-012 on a paint shaker or with a prop blade mixer before use. Do not vortex or agitate violently, as air entrapment or foaming may cause separation of solids.

Application

Electrodag EB-012 is normally applied by printing or spray techniques. For spray application use either a conventional system or, for greater transfer efficiency, high volume low pressure (HVLP) type equipment. Optimum coating thickness is 0.001 inches. However, a thinner coating may be acceptable, depending on individual performance requirements.

Curing

Electrodag EB-012 may be cured by exposure to any of the time/temperature conditions indicated.

- Air dry at room temperature for 24 hours
- Forced dry 3-10 minutes at 158° - 203°F.

Storage/Shipping/Handling

Shelf life for this product is 12 months from date of qualification under original seal. Prolonged storage at temperatures higher than 120°F is not recommended. Do not allow to freeze. Empty containers may retain hazardous properties. Follow all MSDS/label warnings even after container is emptied.

Note!!

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Distributed by: **Ladd Research**
 83 Holly Court
 Williston, VT 05495
 Telephone: (802) 658-4961
 Email: sales@laddresearch.com

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