

**PELCO[®] Conductive Graphite
Isopropanol Based
Product No. 16053**

Isopropanol based graphite resistive and dry film lubricant coating

Description: PELCO[®] Conductive Graphite an easy-to-apply low conductance coating designed to provide conductivity, and excellent release properties to many nonconductive substrates, including most plastics. It has been specified throughout the SEM industry as a conductive path from sample to SEM mount where Silver paint is not suitable for this application. PELCO[®] Conductive Graphite is also a specially processed colloidal graphite dry film lubricant. It air dries rapidly at room temperature and adheres tenaciously to most substrates with minimum surface preparation. The thinness of the coating, coupled with high lubricity, provides clean, long-wearing lubrication without redesign of component dimensions. An aerosol form of this is Product No 16058 Aerosol Graphite

Specific advantages and benefits offered by PELCO[®] Conductive Graphite include:

- Conductive without interfering metal EDX peaks
- Good electrical properties
- High lubricity
- Environmental friendly No ozone-depleting chemicals
- Very stable dispersion
- Easy to handle
- Air drying
- Very good impregnation properties
- Opaque at very thin layers
- High solids content
- Applicable on various substrates
- Excellent coverage of all woven and nonwoven materials
- Sub micron particles

Typical Applications:

Electrical

- Specimen preparation for SEM and EM applications
- Charge bleed
- Plating nonconductors
- Static bleed paths
- Shielding
- Impregnation or coating of gaskets for anti-adherent and anti-static properties

Lubricating, Parting and Optical

- Vacuum lubricant
- Dry lubrication of moving parts in electronic assemblies
- Anti-seize on sliding surfaces
- Mold Release
- Photographic and lithographic opaque

Physical Properties (as supplied):

Color : Black
 Pigment : Colloidal Graphite 20 ±0.2% by weight 10% by volume
 Binder : Thermoplastic resin
 Carrier/diluent : Isopropanol
 Consistency : Thixotropic gel

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Density : 0.90 kg/l
Flashpoint : 11°C (52°F)
VOC : 710 g/l (5.9 lb/gal)
Theoretical coverage : 9.3 m²/kg @ 25 µm (340 ft²/gal @ 1 mil)
Shelf Life : 12 months from date of shipping under original seal

Typical Properties (as cured):

Color : Matte Black
Maximum service temperature – continuous*: 204°C (400°F)
Sheet Resistance : < 2400 ohms/sq @ 25 µm (1 mil) dry film thickness
Coefficient of Friction : 0.15 (Static)

**Service temperature under vacuum conditions is significantly higher.*

Method of Use: Surface Preparation

Substrates to be coated must be clean and dry. A solvent wipe with air dry is sufficient for smooth surfaces. For porous surfaces, use the same procedure followed by heating to drive off entrapped contaminants, solvents or moisture

Application

PELCO[®] Conductive Graphite May be applied by brush in its undiluted form. Diluted PELCO[®] Conductive Graphite may be applied by flow, spray, brush, dip, or sponge methods. The optimum viscosity for each method is best established by pretesting.

Curing

The coating air dries to touch in 5 minutes and is ready for use in 30 minutes. Following the air dry, bake for 5 minutes at 167°F (75°C) to achieve optimum coating qualities in a shorter curing cycle.

Handling

PELCO[®] Conductive Graphite can be stored at temperatures between 41 and 104°F (5° and 40°C). PELCO[®] Conductive Graphite should be stored in a cool place and should not be allowed to freeze. Containers should be tightly re-sealed after use in order to prevent solvent evaporation.

Precautions: See Material Safety Data Sheet for proper first aid instructions.

Container Size: 30 gm net weight

Note: PELCO[®] Conductive Graphite does not contain any ozone-depleting chemicals.

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TED PELLA, INC.

Microscopy Products for Science and Industry

P.O. Box 492477, Redding, CA 96049-2477, U.S.A.

Telephone: 530-243-2200; 800-237-3526 (U.S.A. or Canada) • FAX: 530-243-3761

Email: sales@tedpella.com • Web Site: <http://www.tedpella.com>