

LINQSTAT™ VCF-Series

Low-Level Surface Conductive Polyethylene Film



+ **LOW LEVEL CONDUCTIVITY**

+ **SURFACE RESISTIVITY BELOW 200,000 Ω /sq**

+ **NOT VOLUME CONDUCTIVE**



PRODUCT DESCRIPTION

Electrically conductive polyethylene (PE) film loaded with carbon for medium level conductive or antistatic applications.



PRODUCT APPLICATION

Used for EMI and RFI shielding. Offers medium-level static protection which means it effectively avoids accumulation of electric charge.



PRODUCT FEATURES

Black conductive PE film with a surface resistivity ranging between 50,000 Ω /sq and 200,000 Ω /sq and with an excellent chemical and humidity resistance.



PRODUCT DESCRIPTION

CAPLINQ LINQSTAT™ VCF-Series is a black, carbon-filled, electrically conductive polyethylene plastic film designed to provide both physical and static protection. Having a **surface resistance of < 200,000 ohm/sq, (2x10⁵ Ω/sq)** it offers medium-level static protection which means it effectively avoids accumulation of electric charge on itself and the products which it protects. Its easy-grounding nature makes it ideal for packaging where electrostatic contamination is a problem.

CAPLINQ LINQSTAT™ VCF-Series is useful in applications where the **key is to balance cost versus performance**. As a medium-level surface conductive plastic, the carbon-loading is such that it is low-enough to be cost-effective, while being high enough to meet the electrical requirements of military specification MIL-PRF-81705D Type II and MIL-P-82646A.

CAPLINQ LINQSTAT™ VCF-Series film and its conductivity are unaffected by humidity and age. The film is heat-sealable, flexible and offers exceptional abrasion resistance. The film gives good thermal stability and has outstanding chemical resistance. It has a standard thickness range from 50.8µm to 200µm (0.002" to 0.008") and is available in sheeting, tubing and bag versions. Roll lengths and widths vary depending on thickness and application.

PRODUCT APPLICATION



In sheet form (LINQSTAT VCF-S Series), the conductive polyethylene is used as an antistatic plastic. For volume conductive applications like pressure sensors, CAPLINQ recommends **LINQSTAT MVCF or XVCF-Series**, which are more-conductive series of polyethylene plastics. As an antistatic packaging plastic, it is also used as a **antistatic interleaver for smartcard** (micromodule) applications to separate subsequent layers of smartcard chips in micromodule production. Supplied in both 3 mil (0.075mm) and 4 mil (0.100mm) thin sheets, for this applications, it is slit into 35mm wide rolls in lengths as long as 400m or 500m.



In bag form (LINQSTAT VCF-B Series), the conductive plastic is used to pack static-sensitive components. For this purpose, the bags are supplied in small sizes in boxes of 100 bags per box. Because of its antistatic properties, it is also used in the ordnance industry in larger bag sizes.



In tube form (LINQSTAT VCF-T Series), the conductive plastic is used in the same way as in bag form, but allows the flexibility for the user to determine the length of the bags. As such it is often used for longer electrical components or in automated packaging lines.



► Application :

- Protection and storage of static-sensitive components
- Interleaver between layers of smartcard chips
- Grounding Mats



PRODUCT FEATURES

▶ PRODUCT FEATURES & BENEFITS:

- Surface conductive plastic
- Black Opaque – Printable
- Provides Anti-Static protection to electronics components
- Groundable
- Humidity independent conductivity
- Meets military specification MIL-P-82646A

▶ CHEMICAL SUSCEPTIBILITY:

- Methanol: Resistant
- Ethanol: Resistant
- Isopropanol: Resistant
- Weak Acids: Resistant
- Ketones (Acetone): Slow Attack
- Weak Alkalines: Slow Attack
- Hydrocarbons: Non-Resistant

	UNIT	TYPICAL VALUE	TEST METHOD
TYPICAL VALUES FOR 4MIL (0.1MM) THICK VERSIONS			
MECHANICAL PROPERTIES			
Tensile strength	Mpa	13,8	ASTM-D882
<i>Elongation</i>			
Machine Direction		330%	ASTM-D882
Transverse Direction		390%	ASTM-D882
<i>Dart Impact Test</i>			
50% Failure Weight	grams	390+/-10	Method B
<i>Heat Seal Strength (% of Tensile Strength)</i>			
Machine Direction		96%	ASTM-D882
Transverse Direction		82%	ASTM-D882
Electrostatic Decay	seconds	<2,0	EIA-Std 541
ELECTRICAL PROPERTIES			
<i>Surface Resistivity (Thickness Independent)</i>			
Standard VCF-*S Series	ohms/square	< 200,000	MIL-PRF-81705D Type II
<i>Through Sheet Volume Resistance (Thickness Dependent)</i>			
2 – 8 mil (VCF-2***S Series)	ohm-cm	Not volume conductive	MIL-PRF-81705D Type II



PRODUCT FEATURES

Standard Product Sizes Available:

LINQSTAT VCF-Series is available in the following standard ranges:

- LINQSTAT Black Conductive Sheeting : VCF-S Series
- LINQSTAT Black Conductive Tubing : VCF-T Series
- LINQSTAT Black Conductive Bags : VCF-B Series

Storage and Handling

LINQSTAT VCF-Series is supplied in rolls and should be kept in a cool (10°C – 25°C) dry place (40% – 75% humidity) away from direct sunlight or temperature extremes. Once removed from packaging it should be protected against dust and other impurities.

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

Data Ranges

The data contained herein may be reported as a typical value and/or range values based on actual test data and are verified on a periodic basis.

The above figures are typical material properties only and are not to be used for product specification purposes. To generate a specification for this product, please contact our Quality Manager and request a copy of the current stock specification. The information and recommendations supplied in this document are believed to be accurate but no guarantee of their accuracy is made; they are for guidance only and should not be construed as a warranty. All implied warranties are expressly disclaimed, including without limitations any warranty of merchantability and fitness for use. It is recommended that purchasers before using this product conduct their own tests to determine whether the product is suitable for their particular purposes under their own operating conditions.



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