

TMF-300™ Check Film Static Dissipative Polyester Plastic Film

Description

TMF-300™ Check Film is a clear film product designed to control static electricity. It is a high tensile, high tear strength polyester film surfaced with SciCron Technologies proprietary, clear, C-300™ static dissipative coating. This unique technology prevents charge generation on the film surface, thereby controlling particulate attraction and preventing electrostatic discharge (ESD) events. This performance is permanent and totally independent of humidity. The film also exhibits excellent clarity, toughness, chemical resistance, surface hardness, mar resistance, and dimensional stability.

Applications

TMF-300 Check Film resists tribocharging under all circumstances and cannot generate a charge when properly grounded. This makes it ideal for use in manufacturing and assembly operations for charge sensitive electronic components where it can help prevent both immediate and latent ESD caused defects. Since it resists charge build-up it does not attract contaminants, so it can also help prevent contamination-related rejects in ultra-clean manufacturing operations. Consequently, it is used in the semi-conductor, electronic, micro-manufacturing, and mining industries.

TMF-300 Check Film is ideally suited for use as material for quality control templates to check part placement in PC board manufacturing operations. Its surface can be printed with laser printers allowing reproduction of circuit or component diagrams, as well as instructions for testing and assembly procedures. It can also be used in general industrial applications, such as, control of spark discharge in explosive environments. Other applications include; packaging of sensitive electronic parts, membrane switch components, and overlays to protect bar codes.

Features and Benefits

- *Cannot be tribocharged when properly grounded*
Prevents build-up of static charge and accumulation of harmful contamination.
- *Electrostatic decay in less than 0.05 second per Federal Test Standard 101C, Method 4046.1*
Results in rapid static dissipation without arcing.
- *Surface resistivity of $10^6 - 10^8$ ohms per square*
Provides for ESD control without the need for ionization.
- *Permanence in static dissipation performance*
Avoids cost of application of temporary topical anti-stats.
- *Humidity independent static charge control*
Avoids inconvenience of maintaining high levels of humidity and damage caused by such humidity.
- *Advanced technology, uniform surface treatment*
Avoids charged "hot spots" often found with non-uniform temporary topical anti-stats.
- *Superior optical properties*
High clarity polyester film with C-300 surfacing means excellent transparency.
- *Excellent dimensional stability.*
Means retention of dimensions over a wide range of conditions.
- *High tear and tensile strength polyester film*
Results in long term durability.
- *Hard, mar resistant, durable surface*
Results in long term static dissipative performance.
- *Superior chemical resistance*
Reduces risk of solvent or chemical surface damage.

Availability

TMF-300 Check Film is available as a clear 3.8 mil film in standard thickness.

Standard roll size: 23.5" x 96"

Other roll sizes and film thicknesses are available upon request.

Made in USA

The information and statements contained herein are believed to be accurate, however, users should perform their own testing and verification to determine the durability, applicability and suitability of the products for their own purposes. NOTHING CONTAINED HEREIN SHALL BE CONSTRUED AS A REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXCLUDED. While SciCron Technologies' surface is more mar resistant than the original substrate, the term "Permanent" or "Permanence" is not intended as a guarantee of durability in any particular application. It is used to distinguish SciCron Technologies' surface from topical anti-stats which must be reapplied on a regular basis. All sales are subject to SciCron's standard terms and conditions of sale, which can be found at: <http://www.sctech.com/termscon>

TMF-300™ Check Film

Typical Physical Properties (Typical but not guaranteed values for 3.8 mil film)

Property	Test Method	Units	TMF-300 Check Film
Mechanical			
Tensile Strength			
Machine Direction	ASTM D882A	psi	24,000
Cross Direction	ASTM D882A	psi	33,000
Yield Strength			
Machine Direction	ASTM D882A	psi	14,000
Cross Direction	ASTM D882A	psi	14,000
Elongation at Break			
Machine Direction	ASTM D882A	%	200
Cross Direction	ASTM D882A	%	120
Thermal			
Shrinkage			
Machine Direction	Unrestrained @ 150° C for 5 min	%	0.8
Cross Direction		%	0.8
Optical			
Light Transmittance - Total	ASTM D1003	%	85
Haze	ASTM D1003	%	Less than 4.0
Electrical			
Surface Resistivity	ASTM D257 EOS/ESD S11.11 FTS 101C, Method 4046.1*	ohms/sq	10 ⁶ - 10 ⁸
Surface Resistance		ohms	10 ⁵ - 10 ⁷
Electrostatic Decay		sec	Less than 0.05

* Federal Test Standard 101C, Method 4046.1 as described in EIA-541, Appendix F, Measurement of Electrostatic Decay Properties of Dissipative Planar Materials

Chemical Resistance ASTM D543

Samples immersed in the specified chemicals for 24 hours at room temperature and visually examined.

Chemical	Surface Attack	Visual Evaluation
Deionized Water	None	Clear
30% Sodium Hydroxide	None	Slight Change
30% Sulfuric Acid	None	Clear
30% Nitric Acid	None	Clear
Methanol	None	Clear
Ethanol	None	Clear
Isopropyl Alcohol	None	Clear
Acetone	None	Clear

Precautions:

1. Polyester is a combustible thermoplastic. Avoid exposure to flame and excessive heat. Observe fire precautions appropriate for comparable forms of wood and paper.
2. Clean with soap and water. Do not use abrasives. Avoid inappropriate contact with solvents.