



## Why Use Teflon<sup>®</sup> Static Dissipative Hoses

Are you concerned about interior electrostatic build-up in your hose?

A conductive inner core of Teflon is required for applications where electrostatic potential can occur. The majority of materials serve as good conductors, allowing electrons to move back and forth, therefore, maintaining their equilibrium. However, some materials (including Teflon) are considered insulators, inhibiting the flow of electrons. This can result in static charge build-up on the surface of the Teflon. If this charge increases to a point exceeding the dielectric strength of the material, arcing could occur.

Potential electrostatic build-up inside a hose is influenced by a number of variables:

- 1. The material being conveyed
- 2. The velocity of the conveyed material
- 3. The filtration and/or turbulence in the flow stream
- 4. The humidity and temperature

Materials that are poor electrical conductors will typically possess the following inherent characteristics:

- Non-polarity (an imbalance between protons and electrons)
- Composition of non-mixable material, or a suspended solid (e.g. water and kerosene)

Materials that may be subject to electrostatic concerns (particularly at high flow rates or downstream of filtration) include:

Cyclohexane	Dibutyl Sebacate	Hydraulic Oil
Decalin	Dioctyl Phthalate	Hydrazine
Demethyl Phthalate	Dipentine	Lacquer Solvents
Diacetone	Freon	Lacquers
Dibutyl Ether	Hexane	Mineral Oil
Dibutyl Phthalate	Hezene	N-Octane
Naptha	Silicone Oil	
Napthalene	Skydrol 500 & 700	
Paint	Steam	
Petroleum	Toluene	
Phosphate Ester	Turpentine	
Pinene	Varnish	

Potentially problematic materials can be transferred safely with a Teflon inner core. This inner core allows any electrostatic charge to convey directly to the metallic end connections where charges can be grounded.

## Contact us

Email: <u>info@badger.swagelok.com</u> Phone: 262.790.6100

Follow us

