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atsduct.com

## Static Safe

ATS Inc. is proud to offer the only FM approved duct available with a StaticSafe™ conductive liner.

ATS StaticSafe Duct™ maintains all the features of ATS FXP™ which has made ATS Inc. a leader in the field of Exhaust Duct Systems:

- Corrosion Resistance
- Fire Resistance
- Strength
- No Leakage at Joints
- Extremely low emission of VOCs during installation
- Ease of Installation
- Ease of Modification on a live system
- Low weight to strength ratio

In addition to the benefits of ATS FXP™, ATS StaticSafe Duct™ offers additional protection against static discharge when exhausting flammable or explosive gases.

### Chemical Applications – Flammables

Flammable Gases	Flammable Liquids/Vapors	Pyrophoric Gases (explosive when mixed with air and must be blanketed with nitrogen or argon)
Ammonia	Isopropyl Alcohol	Diborane
Arsine	Methanol	Silane
Dichlorosilane		
Hydrogen		
Phosphine		

For part types and dimensions for StaticSafe Duct™, refer to the Mechanical Drawing Guide (Pg. 54) for ATS FXP™.



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## Composition of StaticSafe Duct™

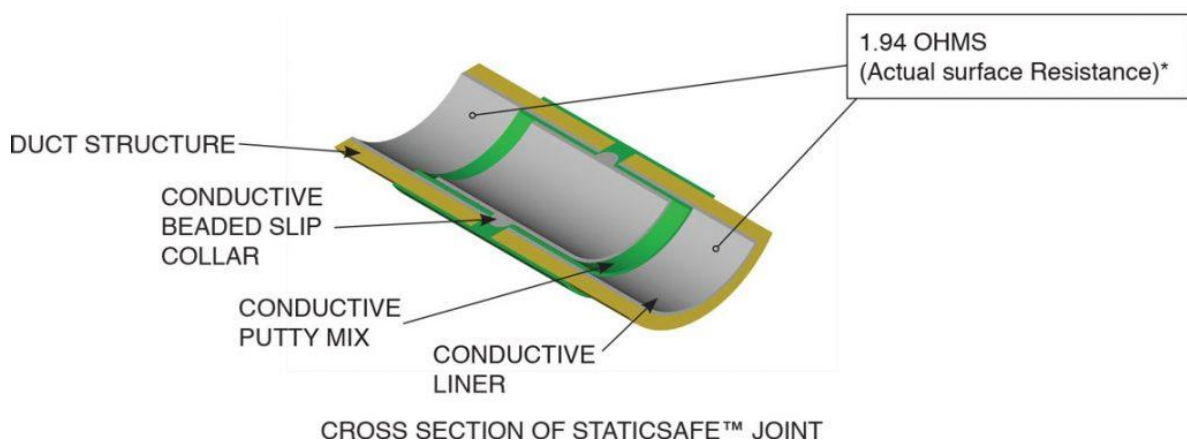
### Internal Corrosion Resistant Conductive Liner

StaticSafe's™ high corrosion resistance compliments its conductivity to make a product that is desirable for corrosive exhaust applications where there is the potential for venting explosive gases and static dissipation is required.

## External Fire Resistant Shell

ATS uses a low smoke, fire safe resin to provide a rigid structural shell, which encloses the corrosion resistant conductive liner.

CONDUCTIVITY THROUGH FIELD JOINT CONNECTION (24 IN. BETWEEN LEADS)



ATS Conductive H-Collar™ and ATS Conductive Slip Collar™ with ATS Conductive Putty™ are used for joining duct sections. There is no need for using cumbersome grounding straps or wires across joints! The joints themselves are conductive. The StaticSafe Duct™ system is self-grounding.



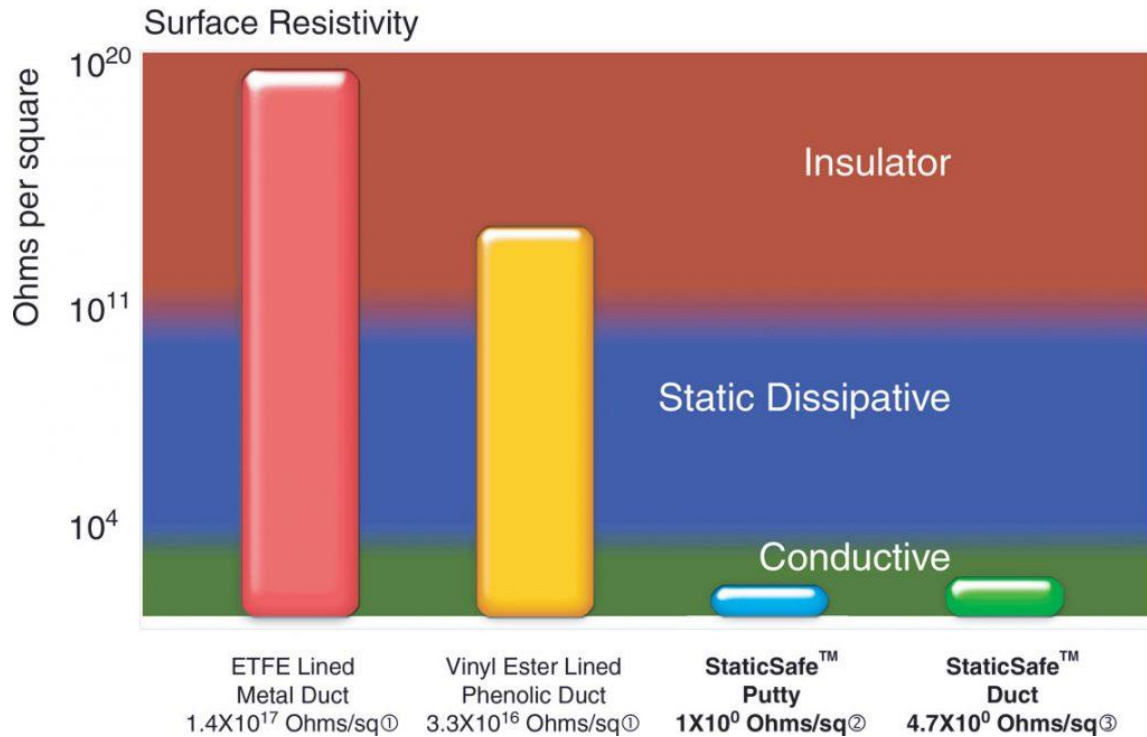
**FM 4922**  
**FM 4910**

ATS StaticSafe Duct™ is Factory Mutual FM4922-Approved. Factory Mutual Approvals approves ATS StaticSafe Duct™ to be used for fume and smoke removal in cleanrooms without the need for interrupters or automatic sprinkler protection.

ATS StaticSafe Duct™ is also FM 4910 Approved. It meets FM's requirements for smoke damage (SDI) and fire propagation (FPI).

Delsen Test Report – StaticSafe™ has been tested for volume and surface resistivity with a measurement of 0.60 Ohms-cm and 4.7 Ohms per square\*, respectively, which exceeds common requirements for conductivity of 1 million Ohms-cm (1×10<sup>6</sup>). Request Delsen test report dated 5/11/01.

## Resistance Comparison\*



1 See Delsen Test Report 05/11/01, pg. 3.

2 See Delsen Test Report 05/11/01, pg. 12. (This uses the following formula: Surface Resistivity= (Width/Potential Electrode Distance) X Resistance (0.33in /0.44in) x 1.21 = .998 Ohms)

3 See Delsen Test Report 05/31/00, pg. 3.

Delsen Test Report – ATS StaticSafe™ has been tested for volume and surface resistivity with a measurement of 0.60 Ohms-cm and 4.7 Ohms per square\*\*, respectively, which exceeds common requirements for conductivity of 1 million Ohms-cm ( $1 \times 10^6$ ).

\* Surface resistivity is expressed in ohms per square, without reference to the size of the square.

The ESD Association Glossary, ESD-ADV 1.0-1994 (1), describes Surface Resistivity in the following way: “For an electric current flowing across a surface, the ratio of DC voltage drop per unit length to the surface current per width. In effect, the surface resistivity is the resistance between two opposite sides of a square and is independent of the size of the square or its dimensional units.

\*\* Resistance (ohms) is the property of a substance to resist the flow of electrical current.