



# Static Control Foams Primer

Conductive (CN), static dissipative (SD), and antistatic (AS) are all terms that are used to describe the static control family of foams. These foams are used when packaging and handling devices that are sensitive to electrostatic discharge (ESD).

Conductive, static dissipative, and anti static are all terms that relate to the amount of surface resistivity that a material is providing. There are a number of standards that relate to this family of material so the best course of action is to identify the resistivity required by the application. For foams intended to conduct or dissipate ESD the most common measurement is surface resistivity, represented in OHMs to the tenth per square\*.

Worldwide Foam, Ltd. offers a static control foam in two different densities. The surface resistivity range for both foams is  $10^5$  to  $10^9$ . Here are the two static control XLPEs we stock:

SC-30-M-3-CH, 3lb Static Control XLPE, 3 x 39 x 79, charcoal

SC-60-U-1-CH, 6lb Static Control XLPE, 1 x 45 x 92, charcoal

Using static control material without first knowing the surface resistivity requirements could result in product damage. We would be glad to test your materials, or we do offer these test devices for sale for \$99.00.

*\*The measurement of electrical resistance is called the ohm. This measurement indicates the degree to which a given material impedes the flow of electricity, which is called the resistivity level of the material. Surface resistivity of foam is measured in OHMs to the tenth per square, with a resistivity of 102 being a very low level of resistance and 1011 a very high level of resistance. This means that a low resistivity item will readily conduct (conductive) electricity and a high level of resistivity will prevent most or all electricity from flowing through the foam. You can gather the resistivity level at how strong or weak the flow of electricity is through a given material with the use of a Surface Resistance Meter. A reading of a lower number of ohms indicates the resistivity allows for more free flowing of electrical charges. Expectedly, a higher number of resistance means the harder it is for electrical charges to travel through the material.*

## References:

ASTM D257 Standard Test Methods for Resistance or Conductance of Insulating Materials.

AWSI/ESD S5412008 ESD Association Standard For the Protection of Electrostatic Discharge Susceptible Items