

ECCOSHIELD® ES

Conductive Surface Coating

Material Characteristics

- ECCOSHIELD® ES is a highly conductive surface coating that is a fine silver based lacquer and is sufficiently fluid enough that it will readily flow into cracks. However, ECCOSHIELD® ES will not fill gross voids at joints or seams; use a caulking compound such as ECCOSHIELD® VY
- Metal to metal contact is improved significantly by applying ECCOSHIELD® ES. The coating fills slight irregularities and makes such intimate contact with exposed metal that even corroded joints can be made acceptable RF seals
- ECCOSHIELD® ES adheres well to metals, plastics, ceramics, wood, and concrete
- When applied to a non-conductor, surface resistivity is substantially less than 1 ohm/square. Successive coats decrease surface resistivity even further

Applications

- ECCOSHIELD® ES was specifically formulated for RF shielding applications and is often used to improve the RF integrity of metal housings or screen rooms
- By applying ECCOSHIELD® ES to joints, seams, and contacting surfaces, it is possible to convert a reasonably good metal structure to one of greater than 100 dB insertion loss from 15 kHz to 10 GHz

Shipping & Availability

- ECCOSHIELD® ES is available in both quarter pound (4 oz.) and one pound (16 oz.) jars
- ECCOSHIELD® ES ships as a hazardous material: Class 3 Flammable, UN1866, PG II

Typical Properties

Density	1.7 g/cc
Service Temperature, °F (°C)	-30 to 150 (-35 to 66)
Surface Resistivity	<1 ohm/square
Coverage per pound, .003" thick layer	36 square ft.
Per/lb. seam coverage in tight contact	200 linear feet
Shelf Life	6 months

Instructions for Use

- ECCOSHIELD® ES can be brushed or sprayed with adequate ventilation recommended. When sprayed using standard spraying equipment, it can drive the silver particles into crevices and other hard to reach places
- If a diluent is needed, use methyl ethyl ketone, MEK
- Remove grease, oil, wax, and other debris from the surface to be coated with a suitable solvent or cleaning agent. If electrical contact is to be established with a metal base, the metal surface must be reasonably free from non-conductive films
- Shake the contents of the container in which the ECCOSHIELD® ES is received in, until it is uniform in consistency, then pour out the desired amount
- Apply the ECCOSHIELD® ES to the prepared surface with either a brush or spraying application
- The coating will normally air dry in one hour to a surface resistivity of less than 1 ohm/square. Apply additional coats if needed
- The handling of this product should present no problems if ordinary care is exercised to avoid breathing vapors, the skin is protected against contamination, swallowing is avoided, and they eyes are protected
- Do not use near an open flame as it is highly flammable. The flash point is 40 °F (4 °C). Keep away from direct sunlight, ovens, radiators, hot water, and other heat sources; high temperatures may cause bursting of the container.