



TRANSPARENT ANTISTATIC COATING

Layer of protection against electric shocks that retains the thermo-optical properties of the support

Potential Applications

Any surface requiring antistatic protection that is not too restrictive

- Glazing (aerospace, automotive, construction, etc.)
- Paints, varnishes (e.g. cleanroom)
- Packaging (electronics packaging)

Invention overview

Transparent antistatic layer formed by surface-integrating electrically conductive nano particles to the top layer of an object

This layer prevents electrostatic charges from accumulating on the surface of the object to protect it from electric shocks while retaining the object's thermo-optical characteristics, including transparency.



Such a layer could protect aircraft windows.

Technological benefits

Transparent and flexible layer

Use of coated particles with optimised dispersion

Integrated in the resin layer

No additional layer required

The conductive particles are metal or doped oxide: 0.5 to 5 mg per m²

Characteristics :

Distance between the electrically conductive particles: approximately 10 to 20 pm

Particles smaller than 0.4 pm

Layer thickness between 5 and 50 µm

Solar absorption factor: α varies between 0.15 and 0.30

Infrared emissivity: $\epsilon \geq 0.8$

Surface electrical resistance: $R_s \leq 10^9 \Omega/\text{square}$

Commercial benefits

Effective and not highly restrictive protection

A simple process

Simplicity, low cost and flexible application process, applied via compressed air powder gun even to complex surfaces

TRL : 9

Patented invention, available under license