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: \(\alpha\) varies between 0.15 and 0.30
Infrared emissivity: \(\varepsilon \geq 0.8\)
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

Patented invention, available under license

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**For further information**

CNES Valorisation :
+33 (0) 5 61 27 35 53
valorisation@cnes.fr

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