ANTISTATIC & CONDUCTIVE

ANTISTATIC & CONDUCTIVE

THE ISSUE

Plastics are insulators with high surface resistance. This leads to electrostatic charging and prevents the feasibility of some processes, e.g. electroplating. Electrostatic charging promotes the adhesion of dust particles, which then leads to soiling and scratches. Conductive coatings can solve these problems.

WORKING PRINCIPLE

The conductivity can be increased by integrating chemical compounds or conductive additives (e.g. copper nanoparticles, graphene, conductive carbon black).

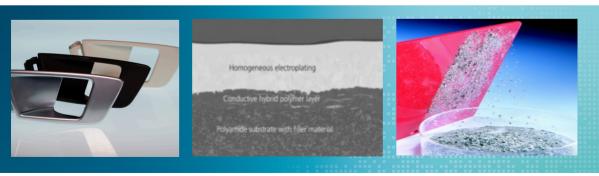
PROPERTIES

- Permanent anti-static effect (surface resistances < 1011)
- Adhesion (DIN EN ISO 2409):
 0-1

- Resistant in condensation
- Taber Abraser Test (ASTM D 1044 - 85): 1.2% scattered light (after 100 cycles)
- Combination with other functionalities (scratch-resistant)
- Different electroplating metals possible (copper, nickel)

APPLICATIONS

- Antistatic finish for polymers or glass
- Base layer for direct electroplating of polymers, e. g. door handles



CONTACT: coatings@isc.fraunhofer.de



