Antistatic/ESD additives
Electrostatic dissipation and discharge protection

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Antistatic/ESD additives
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Resins and plastics are intrinsically insulating materials; nevertheless, materials with conductive and/or antistatic performance features are increasingly demanded for production, protection, comfort and aesthetical purposes.

Our antistatic/ESD additives impart certain conductivity in host materials so that they can release static electricity effectively in a controlled way and thus prevent problems caused by static electricity and uncontrolled electrostatic discharges, such as electric shocks, destruction of electronic circuits, sparks, appliance malfunctions, dust adhesion, etc.

**Electrostatic dissipation**

- **Carbon blacks**
  - Black colour
  - Non humidity dependent
  - Permanent
  - Resistance level range $< 10^6$ Ohms

- **Graphene materials**
  - Low- dosage required

- **Ionic conductors**
  - Permanent
  - Extremely low humidity dependence
  - Colourable
  - Resistance level range $10^6$-$10^9$ Ohms

- **Migratory, non-permanent**
  - Humidity dependent
  - Colourable
  - Limited to $10^10$-$10^12$ Ohms

**ESD Standard EN-61340**

- Conductive: $10^3$ to $10^4$
- Dissipate: $10^5$ to $10^8$
- Insulative: $10^9$ to $10^{12}$

**EN ISO 20344 to 20347:2007**

**Migratory additives:**

- Sulfonates, quaternary amines, etc.
  - Migratory
  - Non-permanent
  - Humidity dependent
  - Colourable
  - Limited to $10^10$-$10^12$ Ohms
avanSTATIC, avanNATUR and avanION antistatic additives ranges share the following features:

- Antistatic and ESD permanent performance
- Colourless and colourable
- Non-migratory
- Low dosage required, cost-effective
- Minimal effect to host material properties
- Food contact grades available
- Solid, liquid, pellet MB formats available

Our products are specifically developed to ensure compatibility with the host matrix, and suitability for the requested performance.

Rubber: avanSTATIC rubber / plast-rub / plast
Latex: avanSTATIC 75B
TPU: avanSTATIC TPU-MB
PU: avanION-35/13/5
PVC: avanSTATIC PVC A-033
EVA: avanNATUR EVASTAT / avanSTATIC 747
PA: avanNATUR nylonSTAT
Coatings and paints: avanNATUR anti-dust / avanSTATIC coat 323 / avanCONDUCTIVE 334
Polyolefins: avanDISS

+ tailor-made solutions for other materials upon demand
Antistatic/ESD additives for rubber:

NBR rubber: **avan**STATIC rubber (powder format) & **avan**STATIC plast-rub (liquid format)

Other rubber grades: **avan**STATIC plast (liquid format)

Latex: **avan**STATIC 75B

+ tailor-made antistatic additives depending on material and production process requirements

Antistatic/ESD additives for EVA

**avan**NATUR EVASTAT is a solid solution, free from petroleum-based materials, specially formulated for EVA sheets.

**avan**STATIC 747, NBR masterbatch form, specially developed for injected EVA.

For more information and TDS, please contact: sales@avanzare.es
Antistatic/ESD additive for TPU

*avan*STATIC TPU MB: concentrated MB in TPU pellet format to match the electrical resistance target of each of our customer’s products. Different TPU grades for the base of the MB are available.

Antistatic/ESD additives for PU

*avan*ION solutions for PU are anhydrous powerful ESD/antistatic additives.

- *avan*ION 35: specially designed for compact and closed-cell PU foams.
- *avan*ION 13: for compact, opened-cell and closed-cell PU applications.
- *avan*ION 5: for compact, opened-cell and closed-cell PU applications.

For more information and TDS, please contact: sales@avanzare.es
Antistatic/ESD additives for PVC

**avan**STATIC PVC A-033: powerful antistatic agent, based on a solid system that generates an intrinsically conductive fibrillar structure within the host polymer matrix. It provides permanent dissipative performance.

**avan**NATUR nylonSTAT: With a completely natural formulation free from petroleum-based materials, this effective antistatic-ESD additive is available in liquid form.

+ tailor-made antistatic additives for PVC depending on material and production process requirements.

For more information and TDS, please contact: sales@avanzare.es

Antistatic/ESD additives for PA

**avan**NATUR nylonSTAT: With a completely natural formulation free from petroleum-based materials, this effective antistatic-ESD additive is available in liquid form.

+ tailor-made antistatic additives for PA depending on material and production process requirements.

For more information and TDS, please contact: sales@avanzare.es
Antistatic additives for coatings and paints:

avanSTATIC coat 323 prevents issues related to static electricity building up, both related to safety, comfort and aesthetic issues such as dust adhesion.

avanSTATIC coat 323 presented in powder form, has been specifically designed for a good integration in every sort of water-based matrices such as paintings, epoxy resins, acrylics, vinylic, polyurethanes, etc.

+ tailor-made antistatic additives depending on materials and resistance requirements.

Antistatic additives for polyolefins

avanDISS is a line of polymeric masterbatches based on polyester resins, capable of producing permanent and colourable antistatic systems.

+ tailor-made antistatic additives for polyolefins depending on the host matrix particularities: MFI, conversion methods, production process requirements, etc.

For more information and TDS, please contact: sales@avanzare.es
avanzare is a well-known graphene materials and graphene/graphite nanoplatelets producer. These laminar materials exhibit an incomparably lower percolation threshold to other materials, and therefore lower dosages of them are required to achieve conductivity in the host polymer matrix. Thanks to their low-dosage requirements they have a minimal effect on the host resin properties.