New coating offers

We have expanded our range of functional coatings:

It is now possible to make glass and plastic electrically conductive by coating them. The application can be done without tempering as well as at high temperature.

Without tempering

Glass and plastics are given

- an antistatic function to dissipate electrical charges on surfaces (explosion protection)
- a sensory function to forward measurement data.

The conductive polymer coatings

- have a surface resistance in the KΩ to MΩ range
- are suitable for temperature-sensitive plastic surfaces
- offer an antistatic function for glass components with shatter protection coating.

The substrates are coated at low temperature by spraying, flooding and dipping, with the final curing taking place at room temperature.

High-temperature application

High-temperature application gives glass surfaces an electrically conductive tin oxide coating

- with added fluorine (FTO), antimony (ATO) and indium (ITO) or
- aluminium (AZO).

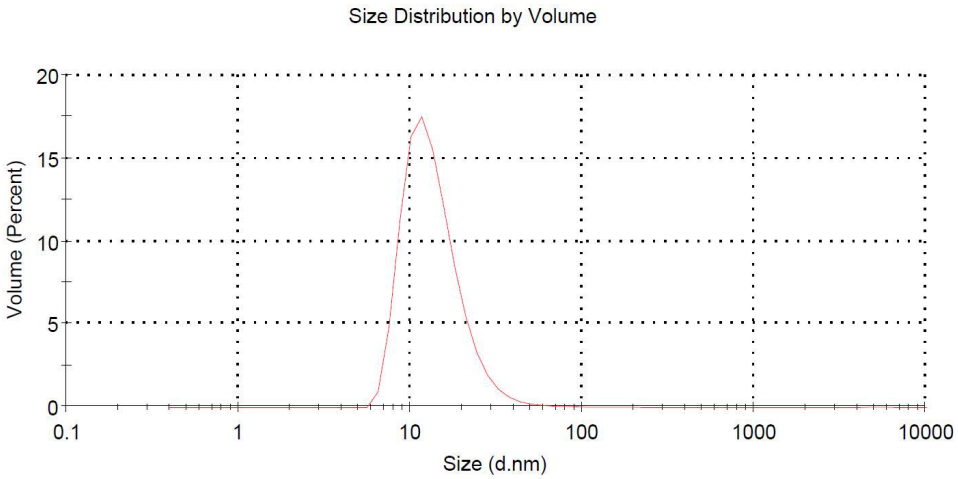
The surface resistance is in the Ω- to kΩ-range. The maximum application temperature is 600° C. The coating is applied by spray pyrolysis on glass

heated to 600° C or by an immersion or spray process with subsequent baking at 500° C.

Agitator ball mill (type MPL2) for the production of ceramic particle dispersions

The use of metal balls up to the size of 100 µm enables a top-down grinding process of ceramic conductive powders with end finenesses down to 20 nm. The capacity is sufficient for dispersions in 5 litres of aqueous or solvent-containing media. Active cooling of the grinding process up to 5°C is used to handle temperature-sensitive material systems.

The diagram below shows the particle size distribution of an electrically conductive dispersion of antimony-enhanced tin oxide, ATO, in organic solvent produced by means of a PML2 agitator ball mill. The particle size of the raw material was about 3-5 µm before the grinding process.



Particle size distribution of the ATO coating solution: DV90 = 21 mn