MecoFill®
Conductive Fillers

Brazel Technology
Advanced Materials

conductive fillers : silver coated glass : microspheres

Silver coated solid glass spheres

MecoFill® silver coated solid glass spheres are electrically highly conductive additives. The electrical conductivity and electromagnetic shielding (EMI/RMI) effect of the powder is comparable to pure silver.

Using glass as chemically inert base material has enabled us to considerably reduce the amount of costly silver, while still achieving maximum electrical conductivity. This gives us acess to fields of applications that are not open to the use of pure silver for reasons of budget constrains.

Applications

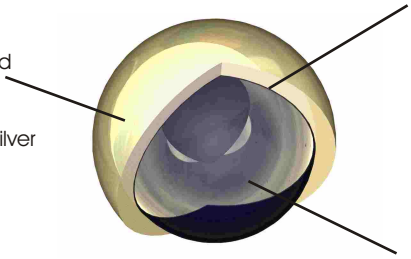
EMI/RMI shielding
electrostatic discharge
PTF pastes
conductive inks
conductive adhesives
conductive TPE
Flip Chip

The silver coating is applied by a unique process that ensures excellent adhesion and uniformity of the silver film. Particle size distribution and the percentage of silver in the powder can be adjusted to meet the customer requirements.

Properties

Silver
Using pure silver as a coating results in low end product resistivity.
The resistivity values range between 10^{-1}-10^{-3} ohm-cm, depending on the percentage of silver and the amount of Mecofill® used for filling.

Example
MecoFill® SG1-32133
71% by volume in silicone
5 mohm cm



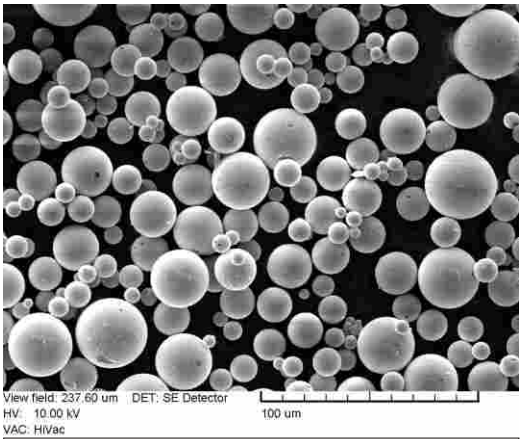
Adhesion
A specially designed coating process ensures an excellent adhesion of the silver coating to the glass surface.

Solid glass sphere
Chemically inert borosilicate glass tolerates highest temperatures while simultaneously reducing the filler density. The reproductible particle size distribution creates the base for an optimum conductivity network and uniform end product quality.

Quality Control

MecoFill® products are subjected to a series of different QC checks In order to ensure that each lot meets our established specifications

- ✓ Powder resistivity
- ✓ Percent silver [%]
- ✓ Silver adhesion
- ✓ Color
- ✓ Density (true + Scott)
- ✓ Particel size distribution



Mecofill SG1-32133

Visit our web site:
www.brazel.com

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Product types

Product #	Percent Silver [%]	Powder-Resistivity [mohm-cm]	Particle size distrib. [µm]			True density [g/cm³]	Scott apparent dens. [g/cm³]
			D10	D90	Mean		
SG1-41211	4	4,0	15	70	41	2,5	1,34
SG1-32132	8	1,34	15	50	32	2,6	1,35
SG1-42142*	8	1,9	25	60	42	2,6	1,34
SG1-32133	12	1,0	15	50	32	2,7	1,37
SG1-42143*	12	1,2	25	60	42	2,7	1,28
SG1-32134	16	0,7	15	50	32	2,8	1,39
SG1-42144*	16	1,0	25	60	42	2,8	1,28
SG1-14113*	12	2,6	8	20	14	2,7	1,06

* developmental product
(ask for availability)

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