

Silver coated hollow glass spheres

MecoFill® silver coated hollow glass spheres (Microspheres) are highly electrically conductive additives. The use of light weight hollow glass spheres as a substrate, allows us to create an additive with a very low density.

This introduces a tremendous cost saving aspect compared to pure silver and gives therefore access to fields of applications that are not open to the use of pure silver.

MecoFill® silver coated hollow glass spheres do not greatly alter the rheological properties of the end product and show a low settling tendency. Therefore they are suited for use in conductive coatings or adhesives.

Applications

EMI/RMI shielding
electrostatic discharge
PTF pastes
conductive adhesives
conductive TPE
Flow Tracing

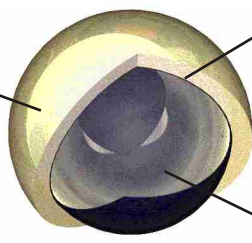
The silver coating is applied in a unique process that ensures excellent adhesion and uniformity of the silver film. Particle size distribution and the percentage of silver in the powder can be adjusted to meet the customer requirements.

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 SG2-100610
40% by volume in Epoxy
1,1 ohm/sq/mil (2,9 mohm-cm)



Adhesion

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

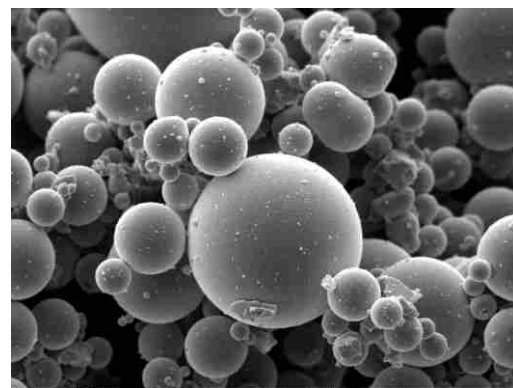
Microsphere

chemically inert light weight filler on boron silicate basis. Hollow bodies prevent the filler from setting off. Particle shape and size distribution enables high packing (optimal conductivity) and at the same time very good flow behavior of the final product.

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 | ✓ Color |
| ✓ Percent silver [%] | ✓ Density (true + Scott) |
| ✓ Silver adhesion | ✓ Particle size distribution |



MecoFill SG2-100608

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Product Types

Product #	Percent Silver [%]	Powder-Resistivity [mohm-cm]	Particel size distrib. [µm]			True density [g/cm³]	Scott apparent dens. [g/cm³]
			D10	D90	Mean		
SG2-40238	33	2,7	15	75	40	n.m.	n.m.
SG2-35158	33	3,0	20	60	35	0,5	0,24
SG2-30138	33	3,0	15	50	30	n.m.	n.m.
SG2-17088	33	4,0	8	30	17	0,9	0,44
SG2-100608	33	4,9	5	20	10	1,8	0,66

n.m. not measured

MecoFill® is a registered trademark of Brazel Research GbR.

The physical and chemical properties of these Brazel Technology products are given as typical mean values based on our test results and are within normal manufacturing tolerances. This does not relieve the end user from his or her obligation to examine the suitability of the product for the use intended by him or her.

Brazel Technology does not provide any guarantee for the product suitability in any individual case. Furthermore, the figures provided must not be understood as constituting a recommendation to violate any existing patents or any patents yet to be established in the future. Subject to technical changes.

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