AgC

Silver Graphite

SCOPE: This information refers to silver graphite profiles and contact tips manufactured by blending of silver and graphite powder, compacting, sintering, extruding and rolling. The deformation results in the alignment of graphite particles along the direction of the extrusion and rolling. A brazeable silver side is produced by decarburization. Profiles clad with a brazing alloy and pre-soldered contact tips are available.

Designation of standard compositions

Profiles show a parallel orientation of the graphite to the contact surface and can be produced with 2 to 4 weight percent graphite.

Contact tips with 2, 3, 4, 5 and 6 % are available either with a parallel orientation (AgC II) or with a perpendicular orientation of the graphite to the contact surface (AgC_I_).

Characteristics

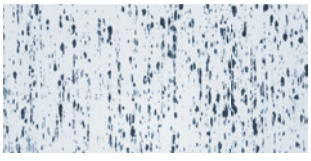
- best anti-welding properties of all contact materials on make with C-contents of 3 % and higher
- best protection against contact welding of closed contacts under short circuit currents
- low erosion on make
- low contact resistance
- inferior arc migration properties

Applications

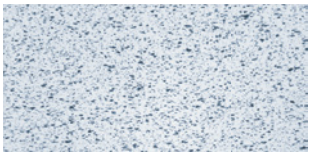
- circuit breakers (MCCB, ACB)
- earth leakage breakers (RCCB)
- miniature circuit breakers (MCB)

Microstructure

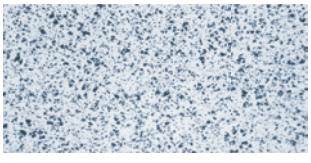
The directional deformation of the material during the manufacturing process causes a strong displacement of the graphite particles into graphite layers.



AgC3
longitudinal section (parallel to the direction of extrusion)



AgC3
cross section



AgC5
cross section

Physical Properties

MATERIAL	DENSITY [g/cm³]	ELECTRICAL CONDUCTIVITY [m/(Ω·mm²)]
AgC2	9.4	49
AgC3	9.1	47
AgC4	8.8	44
AgC5	8.6	43
AgC6	8.4	42

Weld Break Force