SAXONIA®
TECHNICAL MATERIALS

DODUCO®

Ag

FINE SILVER AND SILVER ALLOYS

/ FINE SILVER AND SILVER ALLOYS (Ag)

Scope: Silver, fine-grained silver and silver-copper which has been produced by melting metallurgical methods. Profiles and tips are available with a backing layer of brazing alloy.

- Ag (fine silver, silver content > 99.9 %)
- AgNi0.15 (fine-grained silver, Fg-Ag)
- AgCu3 ...10 (hard silver)
- AgCuNi (ARGODUR 27)
- AgMgNi (ARGODUR 32)

Key Features

Ag

- Highest electrical and thermal conductivity
- Oxidation-resistant, lower contact resistance
- Low weld-on-make resistance
- Tendency for material migration in direct current applications

AgNi0.15 (fine-grained silver) and AgCu (hard silver, similar to Ag)

- Higher wear resistance than Ag
- resistance to welding higher than Ag but lower than AgNi
- AgCu has a higher contact resistance than AgNi0.15, (increases with Cu content)
- Very good ductility and brazing/welding properties

AgMgNi (ARGODUR 32)

- internally oxidized

Applications

Switching currents up to 10 A

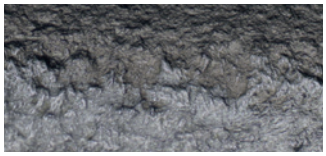
- Relays
- Switches for household appliances
- Light and main switches
- Auxiliary power switches

Delivery form

- Wire
- Profile
- Contact tip

Microstructure

AgCu3
Cross Section, etched



AgNi0.15
Cross Section, etched

Physical Properties

Material	Density	Electrical Conductivity	Hardness (Vickers)		Melting Temperature
	[g/cm³]	[m/(Ω·mm²)]	soft	hard	[°C]
AgCu3	10.4	52	65	120	920 – 940
AgCu5	10.4	51	70	125	865 – 915
AgCu10	10.3	50	75	130	780 – 870
AgCu20	10.2	49	85	150	780 – 810
Ag	10.5	60	40	90	961
AgNi0.15	10.5	58	55	100	960
Ag98CuNi (ARGODUR 27)	10.4	52	50	120	940
AgCu24,5Ni0,5	10.0	45	–	180	805
AgMgNi (ARGODUR 32)	10.5	43	45	100	960

SAXONIA Technical Materials GmbH
Rodenbacher Chaussee 4 / 63457 Hanau / Germany
Tel.: +49 6181 9061-0
technical.materials@saxonia-tm.de / www.saxonia-tm.de

DODUCO Contacts and Refining GmbH
Im Altgefäll 12 / 75181 Pforzheim / Germany
Tel.: +49 7231 602-0
Letterbox@doduco.net / www.doduco-contacts.de