

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)

### 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

### Applications

#### Switching currents up to 10 A

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

#### Delivery form

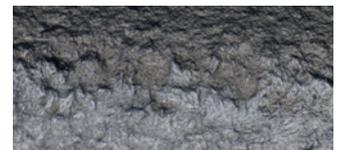
- Wire
- Profile
- Contact tip

### Microstructure



AgCu3

Cross Section, etched



AgNi0.15

Cross Section, etched

### Physical Properties

Material	Density	Electrical Conductivity	Hardness [Vickers]		Melting Temperature
	[g/cm <sup>3</sup> ]	[m/(Ω·mm <sup>2</sup> )]	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
AgNi0.15	10.5	58	55	100	960