

Purpose of Coatings

Heat conduction and distribution
Current conduction
Gravure coating

Soldering and bonding layer
Dimensional / structural repair

Application

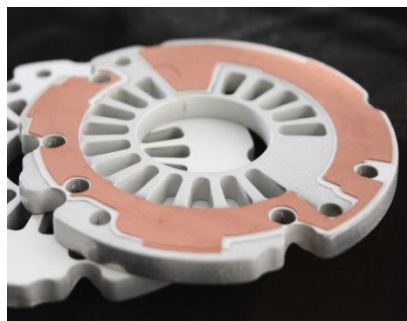
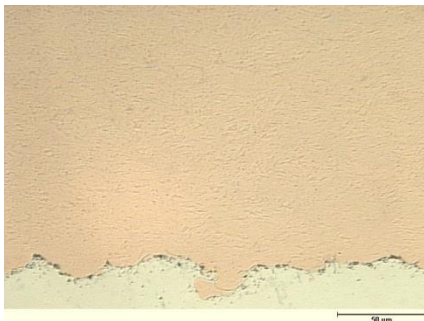
Heat sinks for power electronics
Busbars
Engraved printing roll

Interconnect devices
Electrical contacts
Conducting paths
Die-casts

Features

Coating thickness:	D = 0.05... > 5 mm
Porosity:	$\Phi < 0.5 \%$
Oxide content:	$< 0.1 \%$
Roughness as sprayed:	$R_z \approx 30 \mu\text{m}$
Roughness polished:	$R_a < 0.1 \mu\text{m}$

- Very precise outline-figures of selective coatings
- Highest conductivity of all thermally sprayed coatings
- Low thermal impact on substrat material during coating process



Chemical Specification

Cu

Physical Specification

Hardness: appr. 180 HV_{0.3}
Density: 8.9 g/cm³

Adhesive Tensile Strenght (EN ISO 14916): > 40 N/mm²

Electrical Conductivity (Comp. E-Copper): 45...95 %

Thermal Conductivity: 300...340 W/(m*K)

Coefficient of Thermal Expansion (20°C): 17 x 10⁻⁶/K

Spray Technology

CGS: Cold gas spraying