

HTA-750 High Tensile Alloy Copper Foil - for Batteries

This copper alloy shows excellent bending abilities, high strength and good corrosion resistance. It can be hardened by cold forming and precipitation of NiSi phases during heat treatment.

Copper content (%): ≥ 96,2; rest: Ni and Si

PHYSICAL PROPERTIES – information only

· Density	8,82 g/cm ³
· Melting point	1062 °C
· Electrical conductivity	min. 33 m/(Ω·mm ²) (at 20 °C R760*)
· Electrical resistivity	max. 0,03704 Ω·mm ² /m (at 20 °C R760)
· Thermal conductivity	190 W/(m·K) (at 20 °C)
· Coefficient of thermal expansion (linear)	17,6·10 ⁻⁶ /K (at 20 to 300 °C)
· Modulus of elasticity	130 GPa (at 20 °C R620)

*age hardened

TEMPER					TYPICAL VALUES (information only)	
	Tensile strength Rm in MPa		Yield strength Rp0,2 in MPa		Elongation in % Lo = 100 mm	
	Typical value	sample value	Typical value	sample value	Typical value	sample value
R760	≥ 700	756	≥ 655	738	< 5	1,9

SAMPLE MATERIAL

J) plain – degreased – lamination Quality

0.010 x 250 mm

Material no.

153143

surface roughness (Ra)

carbon residue

passivation

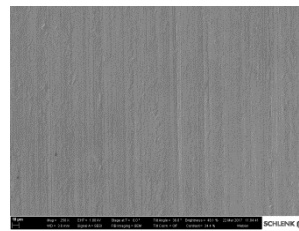
topography

actual value Ra 0.20 – 0.40 μm

solvent degreased / residue < 15 mg/m²

organic tolytriazole derivative

rolled surface



K) plain – electrolytically degreased

0.010 x 250 mm

Material no.

153144

surface roughness (Ra)

carbon residue

passivation

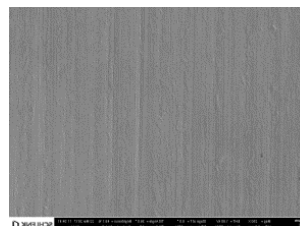
topography

actual value Ra 0.20 – 0.40 μm

electrolytically degreased / residue \leq 4 mg/m²

rolled surface

chromate passivation



SHELF LIFE

- Shelf Life \leq 6 month
- Storage condition: (15-35°C storage temperature) and air humidity (environmental conditions), <85% rel. humidity at original closed package

<i>MANUFACTURING PROGRAM</i> <i>Rolls, spools, sheets</i>	<i>THICKNESS</i>	<i>WIDTH</i>
<i>J) Plain – degreased – lamination quality</i>	<i>0.008* – 0.100 mm</i>	<i>0.6 – 640 mm</i>
<i>K) Plain – electrolytically degreased</i>	<i>0.008* – 0.100 mm</i>	<i>0.6 – 300 mm *</i>
<i>not all combinations of thickness and width are available</i>	<i>* thickness below on demand</i>	<i>* Width up to 650 mm after modification of our manufacturing equipment</i>

FUTURE DEVELOPMENTS

Schlenk is highly experienced in rolling processes and continuously optimizes the features of rolled foils.

Please contact us for future developments e.g. for LiSi Anode (silicon containing) material or others.
 We offer copper alloys for Li ION application in terms of high tensile strength with reasonable conductivity:

- **High Tensile Alloy Copper Foil – HTA-600 – with excellent temperature stability**
- **High Tensile Alloy Copper Foil – HTA-520 – with improved conductivity**

RELATED PRODUCTS

Please consider also our attached information regarding:

- **Cu-PHC copper** for Batteries used for anode material
- **Aluminium Copper-Clad material** used for tab ribbon and bipolar electrode application and
- **Tab Ribbon** made from Copper, Silver, Nickel and their alloys

For further information, please visit our website: www.schlenk.com or contact our Area Sales Manager or your local representative. E-Mail contact: battery@schlenk.com