

Schlenk Metal Foils GmbH & Co. KG • Barnsdorfer Hauptstr. 5 • 91154 Roth-Barnsdorf, Germany www.schlenk.com • <u>battery@schlenk.com</u>

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·mm²) (at 20 °C R760*)
· Electrical resistivity	max. 0,03704 Ω∙mm²/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	TEMPER			TYPICAL VALUES (information only)		
	Tensile strength Rm in MPa		Yield strength Rp0,2 in MPa		Elongation in % L ₀ = 100 mm	
	Typical value	sample value	Typical value	sample value	Typical value	sample value
R760	≥ 700	756	≥655	738	< 5	1,9

Data in this publication is based on careful investigations and is intended for information only. All information shall not be binding, shall carry no warranty as to certain ingredients, as to the fitting for a special purpose, as to the merchantability, or as to the industrial property rights of third parties. Any and all users are obliged to carry out tests on their own authority as well as to check the suitability and the danger of the respective product for a particular application. SCHLENK assumes no liability in this regard; neither to the exactness nor to the completeness of the data. We apply our General Sales Conditions to be found on www.schlenk.com Page 1/3 • rev. 2/2023 • BU MF

TECHNICAL INFOSHEET

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Material no. 153144

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SAMPLE MATERIAL

J) plain – degreased – lamination Q 0.010 x 250 mm	uality	Material no. 153143
surface roughness (Ra)	actual value Ra 0.20 – 0.40 μm	
carbon residue	solvent degreased / residue < 15 mg/m ²	
passivation	organic tolytriazole derivative	
topography	rolled surface	

K) plain – electrolytically de	egreased
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0.010 x 250 mm surface roughness (Ra) carbon residue passivation topography

actual value Ra 0.20 – 0.40 μm electrolytically degreased / residue ≤ 4 mg/m² rolled surface chromate passivation



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SHELF LIFE

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

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

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: <u>www.schlenk.com</u> or contact our Area Sales Manager or your local representative. E-Mail contact: <u>battery@schlenk.com</u>.

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