

SPECIFICATION NORDIC BROWN AND NORDIC BROWN LIGHT

Phosphorous deoxidised copper (DHP-Copper)

EN

CW024A

The oxide layer consists of Cu_2O and CuO -oxides. Nordic Brown is darker than Brown Light in the beginning due the thicker oxide layer. Colour of the Brown Light is light or medium brown and will change darker by time.

Dimension:

Width range	max 1000 mm
Thickness range	0,5...1,5 mm
Coils	max. 4000 kg
Sheet length	max 6000mm

Chemical Composition %:

Copper (Cu)	99.90 (min.)
Phosphorus (P)	0,015-0,040

Physical properties:

Density	8.94 kg/dm^3
Thermal expansion	$17 \cdot 10^{-6} \text{ 1/K}$ ($\Delta T \text{ 100}^\circ\text{C} = 1,7\text{mm/m}$)
Specific heat	385 J/kg K
Thermal conductivity	335 %W/Cm

Mechanical properties:

The material fulfils the requirements of standard EN 1172.

Table 2 — Mechanical properties

Designation		Material condition	Tensile strength		0,2 % proof strength		Elongation	Hardness	
Material Symbol	Number		R_m		$R_{p0,2}$		A_{50mm}	HV	
			N/mm ²		N/mm ²		%	min.	max.
		min.	max.	min.	max.	min.	min.	max.	
Cu-DHP CuZn0,5	CW024A CW119C	R220	220	260	—	140	33	—	—
		H040	—	—	—	—	—	40	65
		R240	240	300	140	—	8	—	—
		H065	—	—	—	—	—	65	95
		R290	290	—	250	—	—	—	—
		H090	—	—	—	—	—	—	90
CuSn0,15	CW117C	R250	250	320	200	—	9	—	—
		H060	—	—	—	—	—	60	90
		R300	300	370	250	—	4	—	—
		H085	—	—	—	—	—	85	110
CuAl5Zn5Sn1	CW309G	R400	400	—	170	—	45	—	—
		H080	—	—	—	—	—	80	—
CuSn4	CW450K	R290	290	390	—	190	40	—	—
		H070	—	—	—	—	—	70	100
CuZn15	CW502L	R310	310	370	200	290	10	—	—
		H090	—	—	—	—	—	90	115

Fabrication properties:

Formability	Excellent
Soldering	Excellent
Brazing	Excellent
TIG	Good
MIG	Good
EBW	Poor

Oxide layer must be removed before the welding, soldering and brazing

Typical use

Architecture, eg. roofing, facades, window and door frames, decoration