

SPECIFICATION NORDIC ROYAL

CuAl5Zn5Sn1 (Aluminiumbronze)

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)	Rem.
Aluminium (Al)	4,0..6,0
Zinc (Zn)	4,0..6,0
Tin (Sn)	0,3...1,6

Physical properties:

Density	abt 8.2 kg/dm ³
Thermal expansion	18*10 ⁻⁶ 1/K (ΔT 100°C = 1,8mm/m)

Mechanical properties:

The material fulfils the requirements of standard EN 1172:2011(E)

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.	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 (cold)	Good
Formability (annealed)	Excellent
Soldering (MIG-wire CuSi3)	Good
Soldering (Pb:Sn 60:40)	Good
Brazing	Poor
TIG	Poor
MIG	Poor

Typical use

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