Brocadur® CNCS material specifications

BROUWER METAAL
RESISTANCE WELDING COPPER ALLOYS

Material number (DIN) 2.0855

Material no. UNS (ASTM) C18000

International standard R.W.M.A Class 3

Abbreviation CuNiCrSi

Standard analysis (percent by weight)

Ni	Cr	Si	Cu
2,4	0,4	0,7	remainder

Classification

DIN 44 759 Class A 3/1
R.W.M.A. Class 3

Material description

Hardenable Cu-alloy with high electrical and thermal conductivity with a high degree of hardness and strength.

Applications

- Plungers in cold chamber die castmachine
- Dies for non-ferrous metal casting
- Brocadur CNCS is the Be-free alternative material to our quality Brocadur CCNB
- Plastic blow moulding and injection moulding

Mechanical properties (at 20° C)

Condition		hardened
hardness (average)	HB 10/2,5	180-220
tensile strength	N-mm²	min. 700
tensile yield strenght	N-mm²	min. 500
A 5 elongation	%	min. 5
Modules of elasticity	N-mm²	115 x 10³
Softening temp.	°C	min. 480

Physical properties (at 20° C)

Specific weight	g / cm³	8,7
Specific heat	J / g.K	0,42
Thermal conductivity	W / m.K	160
Coefficient of expansion (20-200° C)	1 / K	20-100° C 16x10⁶
Electrical conductivity	MS / m	28 MS/m 48% IACS