

Nickel Chrome Boron Composite Rod

Issue 1 14/09/2021

Prepared by: Development Metallurgist
Approved by: Technical Director

Nickel Chrome Boron Composite Brazing Rod consists of crushed & picked fragments of sintered tungsten carbide in a Ni-Cu-Si-B matrix. The rod exhibits high corrosion & wear resistance due to nickel matrix and high quality angular fragments provide good cutting structure.

It is best applied using an oxyacetylene torch onto a bright metal surface. Care should be taken not to overheat the product or inhale its fumes.

Nickel Chrome Boron is the generic term used in the oil and gas industry for nickel based composite rods manufactured using i) Ni-Si-B, ii) Ni-Cr-Si-B or iii) Ni-Cu-Si-B matrices.

Nickel Matrix:

Ni-Cu-Si-B (MSK20NM)— Non Magnetic with a relative magnetic permeability value of ≤ 1.003 :

	C Wt%	Si Wt%	B Wt%	Fe Wt%	Cr Wt%	Cu Wt%	Ni Wt%	Hardness HRC
MSK20NM	0.00- 0.06	1.70- 2.30	0.90- 1.20	0.00- 1.50	-	18.00- 22.00	Bal	8-20

Tungsten Carbide:

Crushed sintered tungsten carbide fragments

The sintered tungsten carbide used in the production of this Composite Rod is manufactured from recycled steel cutting grade tungsten carbide. The tungsten carbide is crushed and carefully sorted to select sharp, chunky pieces for optimum cutting performance and durability.

ANALYSIS (% BY WEIGHT)

% WC	% Co	Balance	Hardness
80 – 88	6 – 8	TiC / TaC	1320/1460 HV