

# Cupro NSH

|                      |         |       |         |         |      |
|----------------------|---------|-------|---------|---------|------|
| Chemical Composition | Ni      | Si    | Cr      | Others  | Cu   |
|                      | 2.8-3.2 | 0.8-1 | 0.4-0.5 | max.0.2 | rest |

Code                      UNS No: C18000

**Material Properties**      Properties have been improved via heat treatment by Sağlam Metal. It was produced as an alternative to Cupro CNB alloy. It can be used almost in all application areas of Cupro CNB. It has a very high wear resistance both at room temperature and at elevated temperatures.

**Application Area**      Used in cases when high electrical and thermal conductivity are desired together with good mechanical properties, Able to be used in spot welding electrodes, groove-welding discs, electrodes of projection and butt welding and welding of stainless steels, Able to be used in parts of plastic injection moulds, Able to be used in plastic expansion moulds, cooling cores and other parts, Able to be used as a permanent mould in casting of alloys like copper, brass and bronze Able to be used in electrodes of wire mesh machines, Able to be used in pistons of aluminium injection castings.

**Heat Treatment**              Delivered in heat treated condition.

|                       |                               |                   |         |
|-----------------------|-------------------------------|-------------------|---------|
| Mechanical Properties | Hardness                      | HB                | 220-240 |
|                       | Tensile strength              | N/mm <sup>2</sup> | 750-850 |
|                       | Yield strength                | N/mm <sup>2</sup> | 650-750 |
|                       | Elongation L=5D               | %                 | 6-10    |
|                       | Modulus of elasticity (20 °C) | GPa               | 130     |

|                     |                                                |                      |       |
|---------------------|------------------------------------------------|----------------------|-------|
| Physical Properties | Electrical conductivity                        | MS/m                 | 23-25 |
|                     | Coefficient of thermal expansion (273 - 573 K) | 10 <sup>-6</sup> /K  | 17    |
|                     | Thermal conductivity (20 °C)                   | (W/mK)               | 210   |
|                     | Density                                        | (g/cm <sup>3</sup> ) | 8.8   |