

WISDOM Thermal Spray Consumables

Nickel base alloy



NiCr 80/20

DATA SHEET

November 2015

Introduction

NiCr80/20 nickel-chromium system shows that chromium is quite soluble in nickel. This is a maximum at 47% at the eutectic temperature and drops off to about 30% at room temperature. A range of commercial alloys is based on this solid solution. Such alloys have excellent resistance to high temperature oxidation and corrosion and good wear resistance.

It can Equivalent to: Tafa06C.

Surface Preparation

Surface should be clean, white metal, with no oxides (rust), dirt, grease, or oil on the surface to be coated. Note: It is best not to handle surfaces after cleaning. Recommended method of preparation is, to grit blast with 24 mesh aluminum oxide, rough grind, or rough machine in a lathe.

Application

- Oxidation Resistance
- Heating Elements
- Thermocouples
- High Temperature Corrosion Resistant Alloys
- Wear Resistant Alloys

Chemical composition

Nominal Composition	Cr %	Ni %
Min	20.0	
Max		Bal.

Specifications

Grade	GE	PWA
NiCr80/20	B50TF119	36947

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Physical Properties

Grade	Density	Melting point °C	Electrical Resistivity at 20°C Ω mm ² /m
NiCr80/20	8.3g/cm ³	1400	1.09

Typical Deposit Characteristics

Typical Hardness	Bond Strength	Deposit Rate	Deposit Efficiency	Machilityineab
HRB 90	7300 psi	11 lbs/hr/100A	65-75 %	Good

Standard Sizes & Packing

Diameter	Dimension Tolerance	Packing	Wire Weight
1/16"(1.6mm)	+0/-0.05	D 300 Spool	15kgs(33 lbs)/spool
2.0mm	+0/-0.05	D 300 Spool	15kgs(33 lbs)/spool
1/8"(3.17mm)	+0/-0.05	Coil Form	20-400kgs/coil

Other sizes (diameter and wire weight) can be produced by customers' requirement.