

WISDOM Thermal Spray Consumables

Nickel base alloy



NiCr35/20

DATA SHEET

November 2015

Introduction

NiCr35/20 is recommended for use in dry air applications up to 2150 degrees F with good hot strength. It is an alloy of nickel and chromium with high electrical resistance; used for resistance heating elements; used in electrical heating application.

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

- Industrial furnaces
- Electrical appliance industry
- Medical Diagnostics, Satellite, and Aerospace
- Ironing machines, water heaters, plastic moulding dies, soldering irons, metal sheathed tubular elements, cartridge elements

Chemical composition

Properties(%)		NiCr 35/20
Main Chemical Composition	Ni	34.0-37.0
	Cr	18.0-21.0
	Fe	42-48

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Typical Deposit Characteristics

Max Continuous Service Temperature(°C)	1100
Resisivity 20oC (Ω mm ² /m)	1.04±
Density (g/cm ³)	7.9
Thermal Conductivity(KJ/m·h·°C)	43.8
Coefficient of Thermal Expansion($\alpha \times 10^{-6}/^{\circ}\text{C}$)	19
Melting Point(°C)	1390
Elongation (%)	>20
Weak magnetic	Weak magnetic

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 can be produced by customers' requirement.