

WISDOM Thermal Spray Consumables

Nickel base alloy



FeNi 52

DATA SHEET

November 2015

Introduction

A controlled expansion alloy that has low thermal expansion properties. It's commonly used in the telecommunications industry in a variety of electronic applications. Alloy 52 is made 52 percent of nickel and 48 percent of iron. It's more durable than nickel by itself. Produced with good machining properties, it's manufactured in a controlled environment under controlled conditions.

They can equivalent to: FeNi 52.

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

- Build-up coatings for dimensional restoration .
- Mould coatings in the glass industry.

Chemical composition

Grade	Ni %	Fe %
FeNi 52	52	Balance

Physical Properties

Grade	Density	Dimension tolerance	Electrical Resistivity at 20°C Ω mm ² /m	Melting Point
FeNi 52	8.2 g/cm ³	+ 0/-0.05	0.37	1435°C

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Typical Deposit Characteristics

Typical Hardness	Deposit Efficiency	Machine Ability
HV 130-215	65-78%	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 can be produced by customers' requirement.