

Product Information

FELDER ISO-Tin[®] - SN100⁻⁴⁰³C

Lead free solder alloy Sn99,25Cu0,7Ni0,05 (Alloy No. 403) - EN ISO 9453:2020

Available in Rods, Blocks, Pellets as well as Solid Solder Wires

Acc. NIHON SUPERIOR - DE-Patent-Nr.: 69918758 and Europa-Patent-Nr.: 0985486

Lead-Free FELDER-ISO-Tin[®] electronic solders do not contain any substances which are subject to restrictions according to directive 2011/65/EG („RoHS“).

Item-No.: 561294 ...

All information about our products are the result of our long standing experience which we would like to pass on to our customers as application support. However, as we do not have any influence on the application of the works carried out with our products, please see the warranty claims in our conditions of sale because our liability is limited.

This product information does not constitute warranted properties.

Application

Lead-free soldering in wave and selective soldering units. A usage in older wave soldering units is also possible, whose pots and nozzles are made of V2A and do not have protective gassing. The experience of our customers shows that most applications can be done without inert gas.

Properties

Beside the well-known advantages of Ni-endowed solders our alloy reaches by adding of germanium improved wetting qualities on all common surfaces in the electronic production and lowest dross formation in comparison to all other lead-free solders.

SN100^{-403C} has a wide soldering temperature window and is applicable in selective soldering processes from 265 °C as well as in dip soldering processes up to 350 °C. With increasing soldering temperature, however, it is to be expected an increasing GE-consumption as well as an intensified Cu-removal!

SN100^{-403C} is unrestrictedly miscible with SN100C™, as it is manufactured exactly according to Nihon Superior Pat. No. EP 0985486B1.

Alloy	Sn100 ^{-403C} (SnCu0,7Ni0,05)
Melting temperature in °C	227 (eutectic)
Soldering temperature in °C	260 - 270
Density in g/cm ³	7,4
Specific heat of fusion J/g	61,0
Surface tension mN/m *	542,45
Electrical conductivity in $\mu\Omega\text{m}$	13,0

* Values from FHG/IZM Berlin

Analysis/Tolerances

Element	Sn	Cu	Ag	Ni	Ge	Pb	Au
Content (%)	Rest	0,6 - 0,7	max. 0,05	0,04 – 0,06	0,005 – 0,007	max. 0,05	max. 0,03

Element	Al	As	Bi	Cd	Fe	Sb	Zn
Content (%)	max. 0,001	max. 0,03	max. 0,03	max. 0,002	max. 0,02	max. 0,05	max. 0,001

**Production is carried out exactly according to the specifications of the
NIHON SUPERIOR patent DE69918758/EU0985486.**

Delivery Forms

200 - 250 g – triangular bar, 400 x 10 x 10 x 10 mm
ca. 400 g - rods, 330 x 20 x 10 mm,
ca. 1,0 kg – rods, 330 x 20 x 20 mm
ca. 3,5 kg – blocks with hanging hole 545 x 47 x 20 mm.
Also, deliverable as solid wire on spools and pellets for first filling.

Advices

Other alloys are included in our standard delivery program.

Storage

Stored at constant indoor climate durable for an unlimited period!