



# Product Information

## Lead-free Nickel Concentrate Sn97Ni3

for FELDER ISO-Tin® NiGe-electronic solder alloys

Art.-No. 5512 011089

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All information about our products is 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.

## Description

Nickel act at the soldering process as a diffusion barrier and is concentrated at the surface of the molten alloy and at the intermetallic zone of the solder joint. Thereby a long term decrease at the solder bath is expected.

**FELDER Nickel concentrate Sn97Ni3** adjusts the Ni-value to the necessary value by adding in wave soldering-, selective soldering- and HASL- machines.

**FELDER Nickel concentrate Sn97Ni3** is also used for the changeover of lead-free standard solder to FELDER NiGe-Electronic solder.

## Properties

Alloy: Sn97Ni3  
Melting point: Reduces in the solder bath to 217 – 227 ° C!

## Application

Addition of Ni-concentrate in NiGe-solder bathes per 100 kg capacity

<b>Current Ni-value in %</b>	<b>0,06</b>	<b>0,055</b>	<b>0,05</b>	<b>0,045</b>	<b>0,04</b>	<b>0,035</b>
<b>Ni-Concentrate addition in kg</b>	-----	0,17	0,34	0,5	0,66	0,84
<b>Current Ni-value in %</b>	<b>0,030</b>	<b>0,025</b>	<b>0,020</b>	<b>0,015</b>	<b>0,010</b>	<b>0</b>
<b>Ni-Concentrate addition in kg</b>	1,0	1,2	1,35	1,5	1,67	2,0

By adding the advised mentioned amounts of the concentrate (Sn97Ni3) a value of 0.06 % nickel in the solder bath is adjusted.

## Maximum impurities / Tolerances acc. DIN EN ISO 9453:2014

<b>Element content (%)</b>	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>Bi</b>	<b>Cd</b>	<b>Cu</b>	<b>Fe</b>
	0,10	0,001	0,030	0,10	0,002	0,050	0,020
<b>Element content (%)</b>	<b>Ge</b>	<b>Ni</b>	<b>Pb</b>	<b>Sb</b>	<b>Sn</b>	<b>Zn</b>	
	0,001	3,0±0,20	0,07	0,10	Rest	0,001	

## Delivery Form

Rolled wire cuttings 10 mm x 150 mm, packed in 5,- kg boxes.

## Advices

**FELDER-ISO-Tin® Lead-free Nickel Concentrate does not contain any substances that are subject to restriction by directive 2011/65/EU ("RoHS").**

Unlimited durable when stored in closed boxes and protected against humidity!