

## Technical Bulletin

### TSC PURALLOY SN100C SOLDER ALLOY

#### DESCRIPTION

TSC PURALLOY SN100C solder alloy is a cost effective, lead free solder alloy developed and patented by Nihon Superior Co. Ltd in Japan. PURALLOY SN100C has been manufactured using a tin/copper eutectic alloy, with the addition of small quantities of both Nickel & Germanium. The inclusion of Nickel reduces copper dissolution and creates shiny joints, the addition of Germanium reduces dross production. These additions ensure that SN100C is a suitable alternative for any lead free wave soldering process with comparable performance to SAC alloys.

TSC PURALLOY SN100C solder alloy is available in 1 kg Bars, 3 kg Ingots and Feed Wire. Chunks are also available to assist in new pot fills or smaller dipping pots on request.

#### Product Features & Benefits

- Eutectic Alloy
- Smooth, Bright Solder Joints
- Bridge-Free Soldering
- Cost Effective Lead-Free soldering - Does not contain Silver (Ag)
- Reduced Copper dissolution.
- Dross Rate Similar to Tin-Lead Alloys
- Complies with IPC J-STD-006

#### TYPICAL COMPOSITION

Typical Alloy Composition			
Sn: Balance	Cu: 0.7	Ni: 0.05	Ge: 0.009

#### MELTING TEMPERATURE RANGE

Typical Melting Temperature
227°C

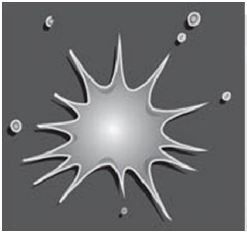
#### HANDLING & STORAGE

Indefinite shelf life applies to solid solder. For other product categories, refer to those specific TDSs. Consult TSC PURALLOY SN100C MSDS for additional handling procedures and precautions.

Parameter	Time	Temperature
Shelf Life	Indefinite	Room Temperature

#### HEALTH & SAFETY

Use with adequate ventilation and proper personal protective equipment. Refer to the accompanying Safety Data Sheet for any specific emergency information. Do not dispose of any hazardous materials in non-approved containers.



# SOLDER CONNECTION

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## TECHNICAL SPECIFICATION

Please find below a list of recommended levels for wave solder bath impurities. For information of specific action plans to bring your solder bath back to an acceptable condition please contact your local sales office.

Element	Typical SN100C	Maximum Impurity levels
Tin (Sn)	Bal	
Copper (Cu)	0.65	0.85
Nickel (Ni)	0.050	0.04 – 0.08
Zinc (Zn)	<0.0005	0.005
Silver (Ag)	0.001	0.15
Antimony (Sb)	0.010	0.05
Lead (Pb)	0.02	0.1
Cadmium (Cd)	0.0001	0.005
Bismuth (Bi)	0.002	0.05
Iron (Fe)	0.003	0.02
Arsenic (As)	0.001	0.05
Aluminium (Al)	<0.0001	0.002
Gold (Au)	0.0002	N/A *

*\*Combine with Copper*

To ensure optimum performance of TSC PURALLOY SN100C Solder Alloy, it is recommended that analysis is taken at least quarterly, dependent on usage. This will ensure optimum alloy composition will be maintained.

Solder Connection provides a full Solder Analysis service designed to help prevent issues within the soldering process. For further information contact your local sales office.

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