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Technical Datasheet

PARTNER WIRE LF 2220NC **Lead Free Cored Wire** **No Clean, Halide Free** **RELO**

Applications:

PARTNER WIRE LF 2220NC is designed for lead-free hand soldering and repair on both lead free and tin/lead soldered board. The unique activation system guarantees very low residues after soldering. The new activator allows for fast wetting especially on difficult surfaces and the post soldering residues remain clear at the higher process temperatures required for lead free soldering.

Product Description

PARTNER WIRE LF 2220NC is a no-clean, halide free solder wire. Standard flux content is 2,2 % but 1,4% is also available. PARTNER WIRE LF 2220NC is available in a variety of lead-free alloys e.g. SnCu0,7; SN100C, SN96C (SAC 387) and SN97C (SAC 305) and is supplied in a wide range of diameters from 0.35 – 3.5mm on 250g, 500g and 1kg reels. Other lead free alloys are available on request.

Performance Characteristics:

- Flux classified per J-STD-004 as: RELO
- Flux classified per EN 61190 -1-1:RELO
- Metal classified per EN 61190 -1-3.
- RoHS complaint *
- Strong shiny solder joints with SN100C
- Excellent solderability
- Clear, non tacky residues

- Copper Mirror Corrosion: low
Tested to J-STD-004, IPC-TM-650, Method 2.3.32
- Silver Chromate Test: pass
Tested to J-STD-004, IPC-TM-650, Method 2.3.33
- Chlorides and Bromides: pass
Tested to J-STD-004, IPC-TM-650, Method 2.3.35
- Corrosion Test: Low
Tested to J-STD-004, IPC-TM-650, Method 2.6.15
- Fluoride by Spot Test: Pass
Tested to J-STD-004, IPC-TM-650, Method 2.3.35.1
- SIR, IPC:
Tested to J-STD-004, IPC-TM-650, Method 2.6.3.3
Test board 0,2mm spaces, 3mm lines ; 5Volt bias voltage **
Data given for SN100C, 1,4%, ø1mm

Patent Information:

DKL Metals Ltd offer licensed products:
SN100C-SnCu0,7Ni (EU 0985486; JPN 3152945; US 6180055)
SN96C-SnAg3,8Cu0,7 (JPN 3027441; US 5527628)
* PARTNER WIRE LF3135NC contains no substances in concentrations which are prohibited by the European legislation 2002/95/EG ("RoHS").

	Reference	LF 2220NC
Day 1	2.8 x Exp. 9	1.7 x Exp. 8
Day 4	2.1 x Exp. 9	2.6 x Exp. 8
Day 7	2.0 x Exp. 9	2.5 x Exp. 8

Physical Properties:

- Acid Number: 200 ± 5% mg KOH/g of flux
Tested to J-STD-004, IPC-TM-650, Method 2.3.13
- Spread Test: 138 mm² ± 15mm²
Tested to DIN EN ISO 9455-10:2000 (alloy SN100C)

- Electrochemical migration: Pass
Test board 0,2mm spaces, 3mm lines; 5 Volt bias voltage **
Data given for SN100C, 1,4%, ø1mm
** Balver spec. LAB /W1



GLOBAL PARTNERS FOR LEAD-FREE SOLDERS



ASIA NORTH AMERICA UNITED KINGDOM CONTINENTAL EUROPE
Nihon Superior FCT Assembly DKL Metals LTD Josef Jost GmbH & Co. KG

PARTNER WIRE LF 2220NC

Packaging:

Reel weight	0.25 kg	0.5/1.0 kg	0.5/1.0 kg
Reel marking	50/28	BZ	K80
Reel height	50 mm	80 mm	80 mm
Reel diameter	50 mm	76 mm	80 mm
Reel hole diameter	11 mm	30 mm	16 mm
Packing (reels/carton)	50	10	10

Standard Diameters/Flux Content:

Wire diameter	0.5, 0.8, 1.0, 1.5, 2.0, 2.5 mm
Flux content (M/M)	1.5, 2.5, 3.5 %

Other diameters and flux contents available on request.

Physical Properties Lead Free Alloys

Partner wire LF2220NC is available in lead-free alloys:

Alloy Name	Composition	Melting Point (°C)	Tensile Strength* 10mm/min (Mpa)	Strain* (%)
SN100C	SnCu0,7Ni	227	32	48
SN96C	SnAg3,8Cu0,7	217	52	27
SN97C	SnAg3,0Cu0,5	208-219	50	32
SnAg4	Sn96Ag4	221	46	33
SNSb5	Sn95Sb5	230-240	46	38
SnCu3	Sn97Cu3	230-250	55	22
SnCu0,7	Sn99,3Cu0,7	227	32	48
BiSn42	Bi58Sn42	138	75	33

More alloys are available on request.

* mechanical properties from bulk samples

Max. Impurity level of SN100C

Sn	Cu	Ni	Pb	Sb	Bi	Ag	Zn	Fe	Al	As	Cd
Bal	0.6 ±0.1	*	0.05 max	0.05 max	0.03 max	0.05 max	0.002 max	0.02 max	0.002 max	0.03 max	0.002 max

Max. Impurity level of SN96C

Sn	Cu	Ni	Pb	Sb	Bi	Ag	Zn	Fe	Al	As	Cd
Bal	0.7 ±0.1	0.005 max	0.05 max	0.05 max	0.01 max	3.8 ±0.2	0.001 max	0.008 max	0.001 max	0.01 max	0.001 max

Storage and shelf life:

Store in a clean, dry environment and normal room temperature. Shelf life 2 years from manufacturing date under normal conditions

Health & Safety:

Read the material safety data sheet and warning label before use.

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