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Technical Datasheet

PARTNER WIRE LF 3135 NC

Cored Wire with Activated Rosin Flux

Applications

PARTNER WIRE LF3135NC is a new product developed for all lead-free solder alloys and applications. The new activator system is based on a successful two step activator. PARTNERWIRE LF3135NC is designed for applications where higher activation with less residues are required.

Product Description

PARTNER WIRE LF3135NC is a halide containing, rosin based no clean solder wire. The standard flux content is 2.2% but 1.4% is also available. The activator of PARTNER WIRE LF3135NC is designed to meet the higher temperature requirements for lead free alloys. PARTNER WIRE LF3135NC shows good thermal stability due to a synthetic modified rosin. The post soldering residues, can be left on the board without cleaning. PARTNER WIRE LF3135NC 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 0.3 – 3.5mm on 250g, 500g and 1kg reels.

Performance Characteristics:

- Classified per J-STD-004 as: REM1
- Classified per EN 61190-1-1: REM1
- Metal classified per EN 61190-1-3.
- RoHS compliant*
- Compatible with RoHS compliant solder masks
- Excellent solderability
- Clear hard residues

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").

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)

- Copper Mirror Corrosion: M

Tested to J-STD-004, IPC-TM-650, Method 2.3.32

- Silver Chromate Test: positive

Tested to J-STD-004, IPC-TM-650, Method 2.3.33

- Chlorides and Bromides: ≤ 1%

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 SN 97, 2,2%, ø1mm

	Reference	LF 3135
Day 1	2.8 x Exp. 9	2.9 x Exp. 7
Day 4	2.1 x Exp. 9	1.9 x Exp. 8
Day 7	2.0 x Exp. 9	2.1 x Exp. 8

- Electrochemical migration: Pass

Test board 0,2mm spaces, 3mm lines; 5Volt 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

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, 0.7, 1.0, 1.2, 1.6, 2.0, 2.5 mm
Flux content (M/M)	1.4, 2.2 %

Other diameters and flux contents available on request.

Physical Properties Lead Free Alloys:

Partner wire LF3135NC is available in the following 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	217-220	50	32
SnAg4	Sn96Ag4	221	46	33
SNSb5	Sn95Sb5	235-240	46	38
SnCu3	Sn97Cu3	227-310	55	22
SnCu0,7	Sn99,3Cu0,7	227	32	48
BiSn42	Bi58Sn42	138	75	33

Further 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	0.5 ±0.1	0.05 max	0.05 max	0.03 max	0.05 max	0.001 max	0.02 max	0.001 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/Shelf Life:

Store in a clean dry environment at normal room temperatures. Has a minimum 2 years shelf life.

Health & Safety:

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

GLOBAL PARTNERS FOR LEAD-FREE SOLDERS

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