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Koki No-Clean **LEAD FREE** Solder Paste

Jet Dispensing Solder Paste

SS70-E160DN *Leaded: Sn 36Pb 2Ag

S3X70-E160DN *Lead Free: Sn 3Ag3 0.5Cu



Product Information

Disclaimer

This Product Information contains product performance assessed strictly according to our own test procedures and is not the guaranteed results at end-users. Please conduct thorough process optimization before mass production application.



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Feature

- Solder alloy

S3X: Sn 3.0Ag 0.5Cu
SS: Sn 36Pb 2Ag
- Designed for high-speed & fine pattern JET dispensing
- Ensures good meltability for the dispensing application solder paste in N₂ atmosphere reflow
- In compliance with Halogen Free standard (BS EN14582, Br+Cl < 1,500 ppm)



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Specification

Application		Jet dispensing	
Product No.		S3X70-E160DN	SS70-E160DN
Allo	Alloy composition (%)	Sn 3.0Ag 0.5Cu	Sn 36Pb 2Ag
	Melting point (°C)	217 ~ 219	179 ~ 190
	Shape	Sphere	
	Particle size (μm)	10 ~ 25	
Flux	Halide content (%)	0	
	Flux type*1	ROLO*3	
Product	Flux content (%)	15.0±1.0	13.0 ± 1.0
	Viscosity*2 (Pa.s)	80±20	80 ± 20
	Copper plate corrosion*3	Passed	
	Tack time	> 48 hours	
	Shelf life	0 ~ 10°C	3 months
-20 ~ -10°C		6 months	

*1: Flux type:

IPC J-STD-004A

*2: Viscosity:

Malcom viscometer 25 °C~ 10 rpm

*3: Copper plate corrosion:

IPC J-STD-004A



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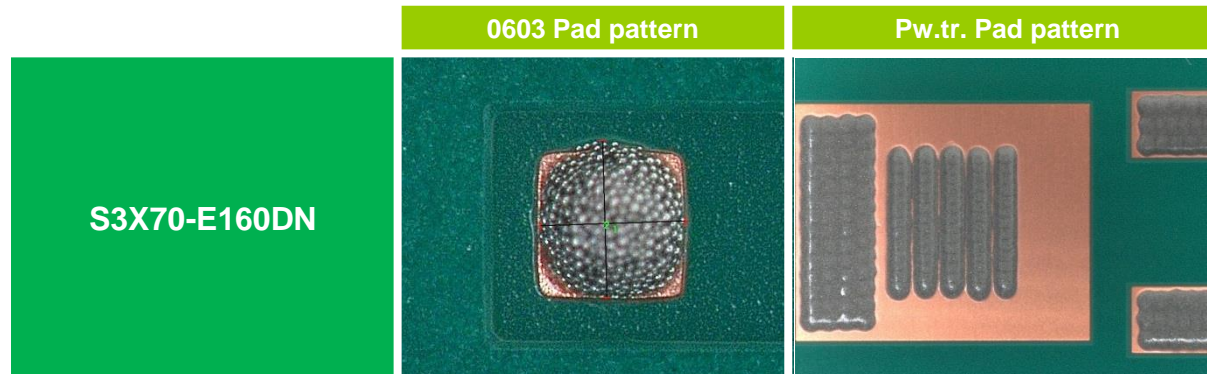
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Jet Dispense Performance

Test condition

- Equipment: Mycronic jet dispenser
- Atmosphere: 24~26 °C (50~ 60 %RH)
- Test pattern: 0603 Pad, Pw.tr. Pad



Good dispensability and consistent dispense volume.



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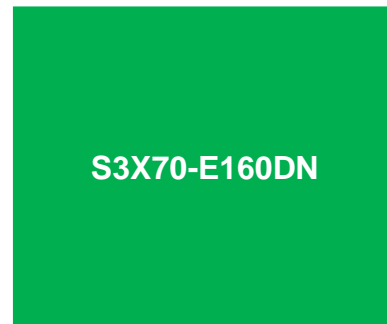
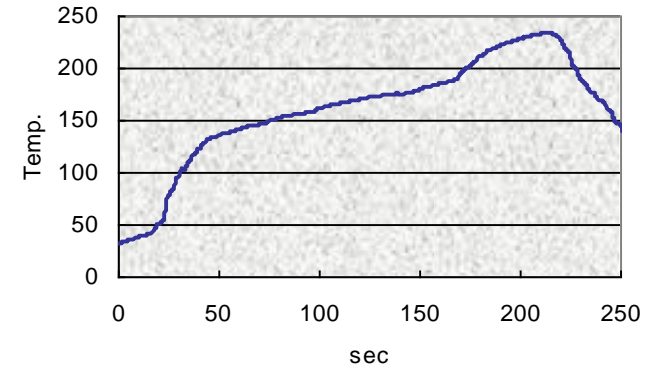
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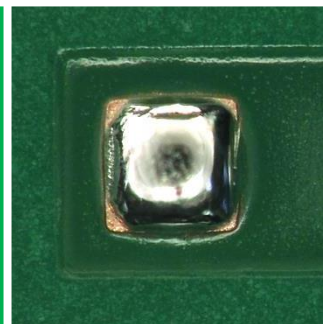
Meltability

Test condition

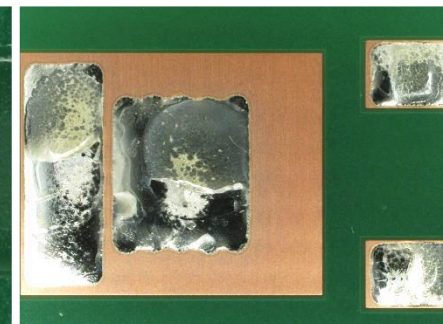
- Test board : FR-4 (See below)
- Surface finish: OSP
- Test pattern: 0603 Pad, Pw.tr. Pad
- Heat source: Hot air convection reflow oven
- Atmosphere : N₂ (O₂ density: <3000 ppm)



0603 Pad pattern



Pw.tr. Pad pattern



Excellent meltability.



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Other Properties

Item	Result	Method
Tack time	> 48 hours	JIS Z 3284-3
Copper mirror test	Type L	IPC-TM-650 2.3.32
Copper plate corrosion test	Pass	IPC-TM-650 2.6.15
Surface insulation resistance	>1.0 x 10 ⁹ Ω	IPC-TM-650 2.6.3.3



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1. Dispensing Condition

- Proper Needle Size: S3X70-E160DN > 250 μm
SS70-E160DN > 250 μm
- Syringe Pressure: 10 ~ 150 kPa
- Needle Shape: Needle for jet dispensing

*Optimal dispensing condition depends on the dispenser and the needle diameter.
Please investigate best setting and combination on.

- Usage Environment: 23 ~ 25°C / 40 ~ 60 % RH

2. Shelf Life

- 0~10°C: 3 months from the date of production
- -10 ~ -20°C: 6 months from the date of production in a freezer for S3X70-E160DN only.

*Store the product in a freezer upon delivery.

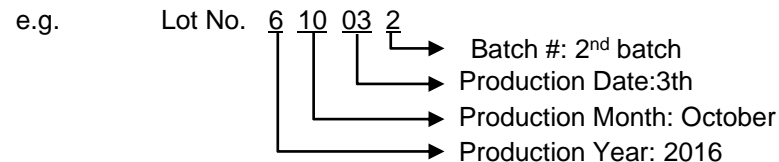
Take the product out of the freezer (beware of frostbite) and let stand in a room temperature (20~30°C) for 2 to 3 hours.
A frozen syringe is more fragile than a syringe at room temperature. Please handle with care.

3. Pot life

- Once it is returned to room temp. but no yet used: 3 months from manufacturing date by storing it back in refrigerator at 0~10°C
- Once it is started to use: Recommended to use up within 24 – 168 hours (1 week)

*CAUTION: Make sure that no flux separation in a syringe can be observed.

4. How to interpret the product lot number



Handling Guide - Recommended Reflow Profile

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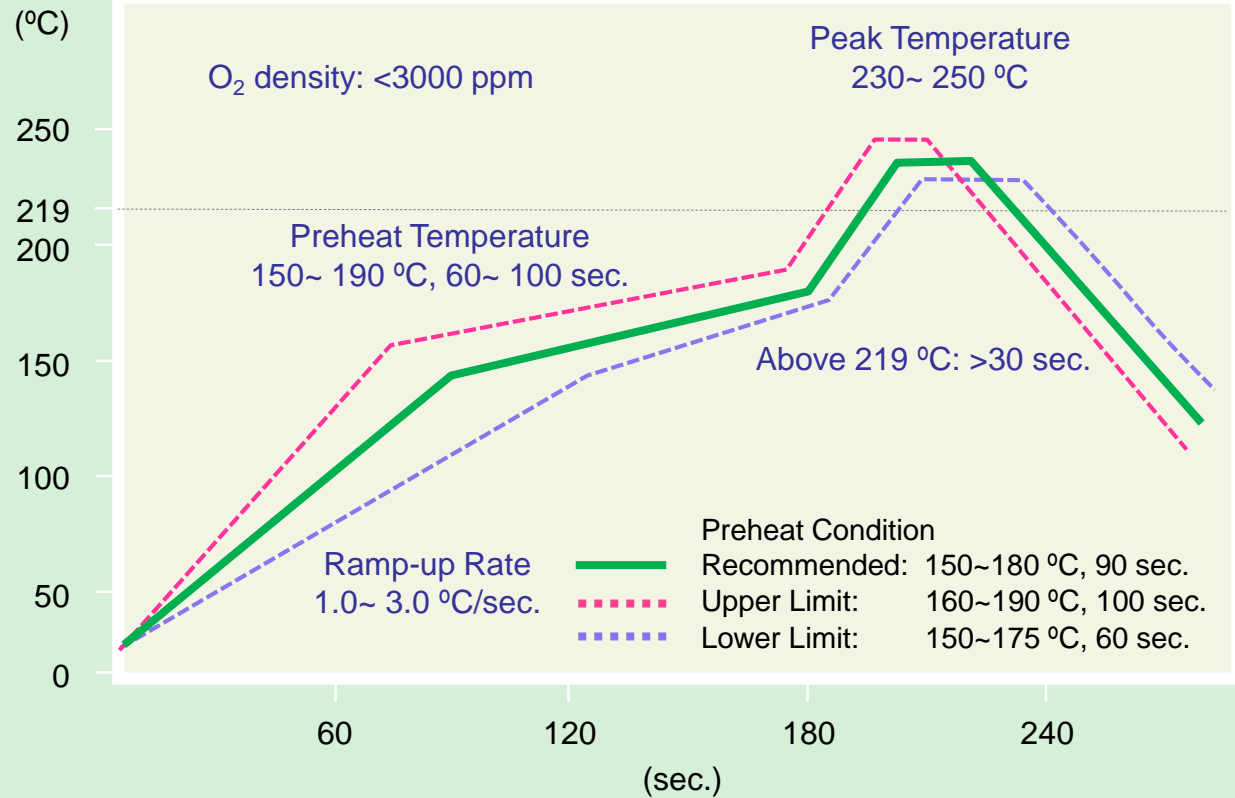
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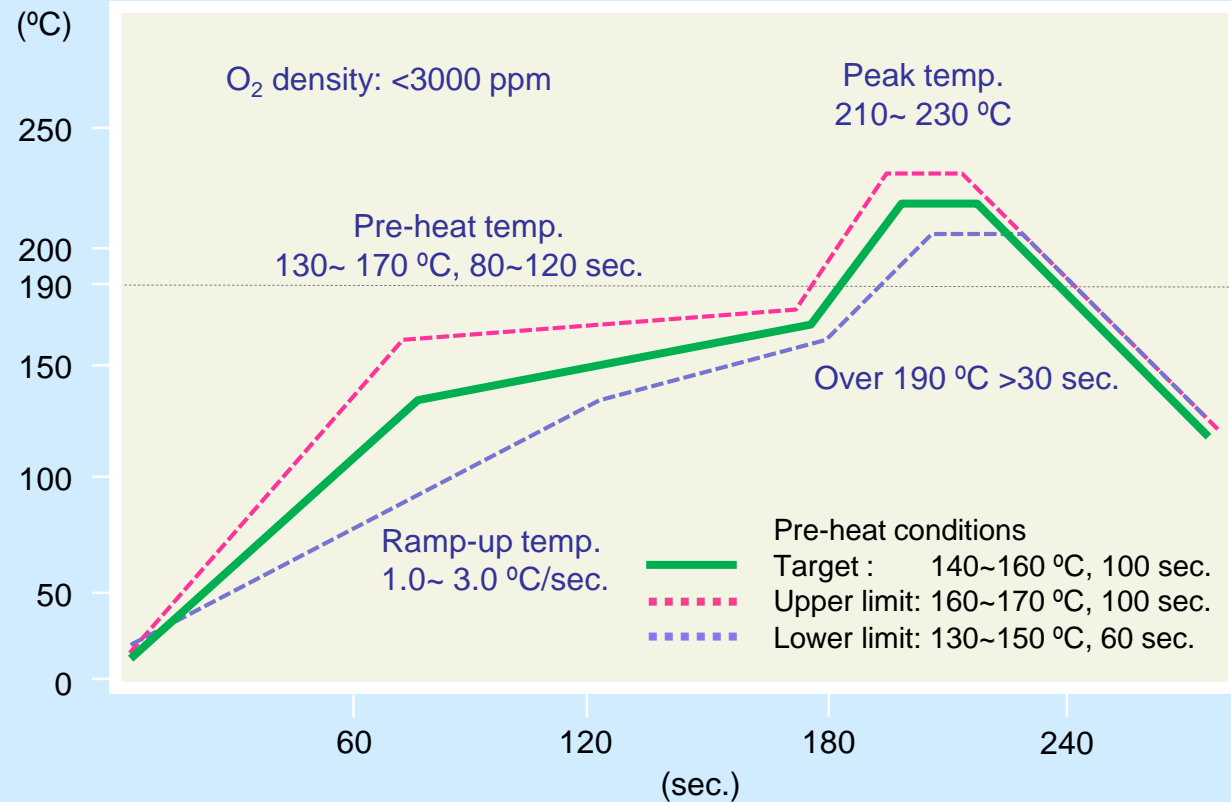
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