

■ Product information

Solder paste AP-10 has been designed as a no clean, air or nitrogen reflowable, solder paste. This formula has a wider process window and shows better activity on OSP boards than previous no clean formulations. AP-10 is a solder paste that maintains its activity and printing characteristics for up to 8 hours without shear thinning. AP-10 can tolerate printing pauses of up to 60 minutes with an effective first print down to 0,5mm. The residues from AP-10 are light amber and clear of solder balls. AP-10 shows a good activity and is therefore suitable for lead-free alloys like tin/copper (SnCu) or tin/silver (SnAg).

- Very good wetting behaviour on most surfaces.
- High printing speeds up to 150 mm/sec
- High activity on all substrates including OSP-boards
- Very long stencil life of more than 8 hours.
- Suitable for BGA and μ BGA
- Very good tack time up to 24 hours

■ Physical properties

Data given for Sn36Pb2Ag 90% Metal, 25-45 micron

Viscosity

Brookfield: 800 kcP
IPC-TM-650 2.4.34 +2

Tackiness

18-24 hours

Slump: pass

J-STD-005, IPC-TM-650, Method 2.4.35
EN 61190-1-2:4.6

Solder Balling Test: pass

J-STD-005, IPC-TM-650, Method 2.4.43
EN 61190-1-2:4.7

- J-STD-004 Flux classification: RELO

DIN EN 29454-1: 1.2.2.C

IEC 61190-1-1:RELO

- Very good printing characteristics to 0,4 mm pitch with type 3 powder.
- Very good slump characteristics.

■ Reliability Properties

Data given for Sn36Pb2Ag 90% Metal, 25-45 micron

Copper Mirror Corrosion: L

J-STD-004, IPC-TM-650, Method 2.3.3

Silver Chromate: pass

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

Fluoride by Spot Test: pass

J-STD-004, IPC-TM-650, Method 2.3.35.1

Insulation Resistance

J-STD-004, IPC-TM-650, Method 2.6.3.3

AP-10, uncleaned after 24 h: $9,6 \times 10^8 \Omega$

AP-10, uncleaned after 96 h: $1,0 \times 10^9 \Omega$

AP-10, uncleaned after 168 h: $1,0 \times 10^9 \Omega$

Control board after 24 h: $1,1 \times 10^{10} \Omega$

Control board after 96 h: $1,2 \times 10^{10} \Omega$

Control board after 168 h: $1,2 \times 10^{10} \Omega$

■ Cleaning

AP-10 is a no clean formula. The residues do not need to be removed. Although AP-10 is a no clean formula, its residues can be easily removed using automated cleaning equipment with a variety of cleaning agents.

■ Packaging

Jars: 250g and 500g Cassettes: DEK ProFlow cassette 750g
Cartridges: 600g and 1200g Syringes: 10cc (35g) and 30cc (100g)

■ Storage and Shelf Life

Jars: maximum 6 months in a sealed jar, kept under standard refrigeration between 6 -16 °C.

Cartridges: maximum 3 months kept under standard refrigeration between 6 -16°C.

■ Printing Parameters

- Squeegee Blade: stainless steel
- Squeegee Speed: 25-50 mm/sec typical, speeds up to 150mm /sec possible
- Stencil material: stainless steel
- Temperature / Humidity: Optimal ranges are 35-65% humidity and 21-25 °C

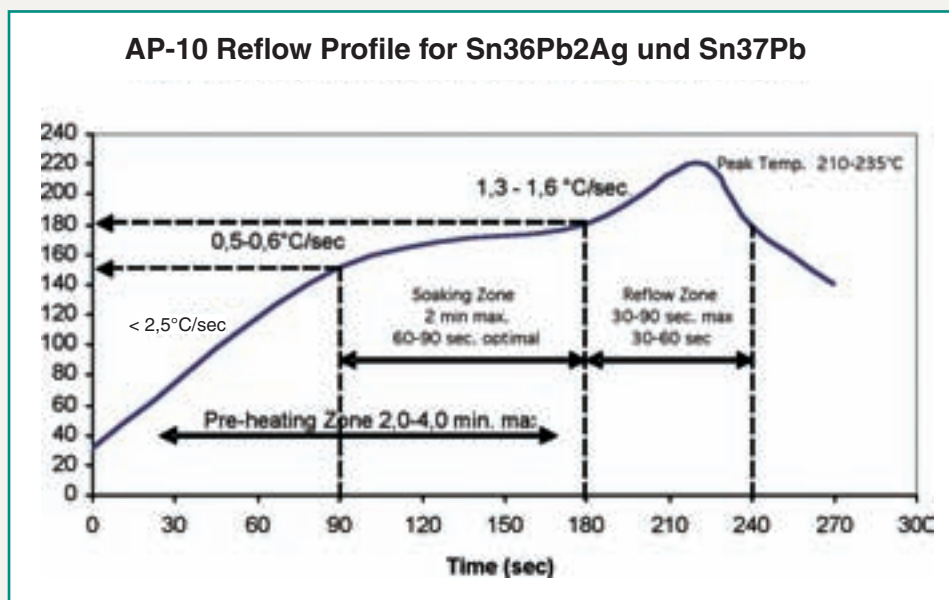
■ Solder Alloys

Possible alloys are: Sn37Pb
Sn36Pb2Ag

Possible leadfree alloys: Sn0,7Cu
Sn3,5Ag

Other alloys on request.

■ Reflow Profil



The technical information contained herein is consistent with the properties of this material but should not be used in the preparation of specifications as it is intended for reference only.