## Dispensing Nozzles ⇔ Solder Pastes

The smallest required dispensing dot size determines the nozzle aperture. This, in turn, dictates the maximum particle size of the solder paste to be used.
The nozzle aperture diameter divided by 7 gives the maximum particle size of the paste that can be used.
Exampel:

Nozzle diameter = 0.2 mm

Calculation:

0.2 mm : 7 = 0.028 mm = 28 µm

Selected paste:

Super-Finepitch 10 - 25 µm

Exceeding the particle size thus calculated will lead to blockages.

NOTES:

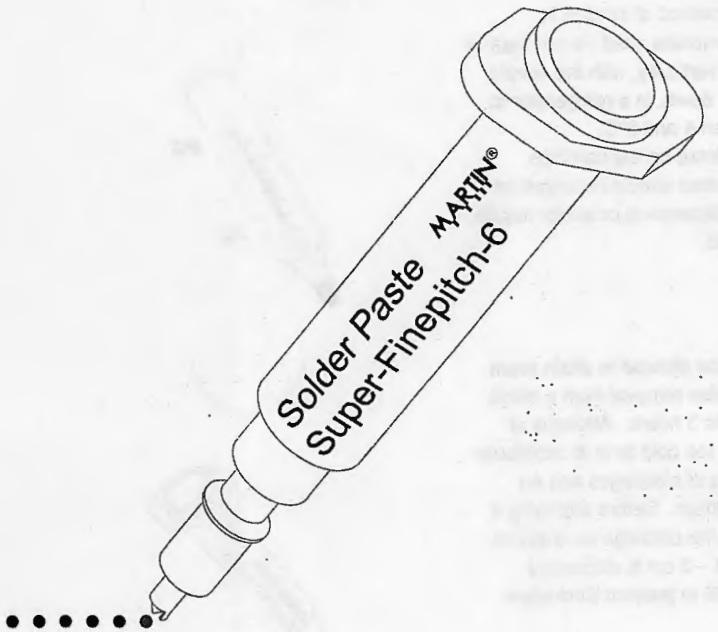
- „Super-Finepitch-6" requires shorter soldering times, as its flux is used up more quickly.
- „Super-Finepitch" pastes should only be used for Finepitch applications (Pitch < 0.8mm).
  Large dot sizes, combined with small nozzle apertures, result in undesirably long dispensing times.

| Pitch | Nozzle | Spacer | Paste | |
|---|---|---|---|---|
| 0.8 – 2.5 | Metal 0.4 mm | 0.25 mm | Finepitch-3 | 25 – 45 µm |
| 0.6 – 1.5 | Metal 0.3 mm | 0.13 mm | Finepitch-3 | 25 – 45 µm |
| 0.5 – 1.0 | Metal 0.2 mm | 0.10 mm | Super-Finepitch-5 | 15 – 25 µm |
| 0.4 – 0.8 | Micro 0.17 mm | (fix 0.08 mm) | Super-Finepitch-6 | 5 – 15 µm |
| 0.3 – 0.6 | Micro 0.14 mm | (fix 0.07 mm) | Super-Finepitch-6 | 5 – 15 µm |



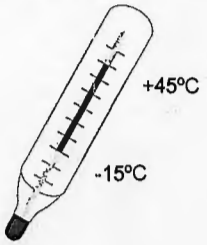
MARTIN®

# Solder Paste - ABC



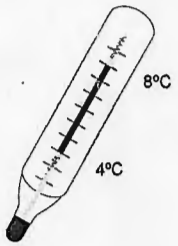
## Dispatch

Solder pastes are generally sensitive to extremes of temperatures. Therefore we send the paste in a special thermal protection packing. This has the task of preventing the freezing or overheating of the paste, which could otherwise render it unusable.




## Storage

The recommended method of storage to achieve a stable six months shelf life consists of arranging cartridges vertically, with the nozzle connections pointing down, in a refrigerator at temperatures between 4 and 8°C.
Use By Dates are printed on the cartridge labels. Out of date paste should no longer be used as acceptable dispensing or solder results cannot be guaranteed.




## Preparation

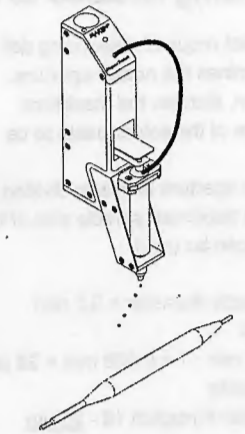
Solder paste should be allowed to attain room temperature slowly after removal from a fridge. This usually takes 2 to 3 hours. Attempts at dispensing when still too cold tend to contribute to increased incidents of blockages and an irregular dispense pattern. Before attaching a dispensing nozzle to the cartridge we suggest that a short bead of 2 – 3 cm is dispensed manually; this will tend to prevent blockages.






## Use

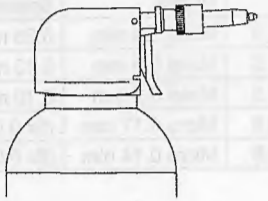
The ideal temperature for dispensing is 28°C. Lower temperatures can cause 'stringing' and higher ones tend to increased blockages and/or flux separation.
When present, any Nozzle Heating of the Dispensing Head or Pen should be used.



## Cleaning - Nozzles

The Metal Dispensing Nozzles and the Mikro Dispensing Nozzles can be cleaned with the cleaning set supplied:

- Any residual paste should be expelled from the nozzle with the cleaning tool (please observe the correct direction).
- The nozzle is then fitted to the adapter of the cleaning spray and flushed through. Should the aperture still be blocked, please use the cleaning wire to recreate an opening from the inside.
- To check for cleanliness cleaning paper can be inserted, rotated and the inside of the nozzle wiped out.



NOTES:

- Cleanliness is the prerequisite for precise dispensing.
- To postpone the cleaning of nozzles for up to 2 days (no longer, as after that time corrosion between metal nozzles and solder paste can set in) they can be immersed in alcohol, which prevents their drying out.