



AIM RECOMMENDED PRODUCT INFORMATION

July 3, 2008

No-Clean Tin/Lead Applications

Product	When to Recommend
NC254 Solder Paste	Default NC paste for tin/lead. Excellent wetting and printing. Also offers good dispensing characteristics.
264-5 Flux	For foam applications. Possible to spray.
266-3 Flux	For spray applications. May be foamed with a fine stone.
263UR Flux	For dipping applications.
270WR Flux	VOC-Free for spraying.
Underfill 623	Designed for use as a capillary flow underfill for flip chip, CSP, BGA and μ BGA assemblies.
One-Step Underfill 688	A non-odorous, low surface tension, one component epoxy resin designed for flip chip, CSP, BGA and μ BGA assemblies.
Glow Core 2% Wire	Excellent wetting, clear hard residues, shiny solder joints.

No-Clean Lead-Free Applications

Product	When to Recommend
NC257-2 Solder Paste	Default lead-free paste. Excellent wetting and printing. Also offers good dispensing characteristics.
271 Solder Paste	Utilized with Sn/Bi and Sn/Bi/Ag alloys.
270WR Flux	Default NC flux for lead-free wave soldering. VOC-Free flux for spraying.
275 Flux	VOC-Free spray flux specifically designed for use with SN100C.
265 Flux	IPA-based flux for foaming or spraying applications.
263UR Flux	For dipping applications.
Underfill 623	Designed for use as a capillary flow underfill for flip chip, CSP, BGA and μ BGA assemblies.
One-Step Underfill 688	A non-odorous, low surface tension, one component epoxy resin designed for flip chip, CSP, BGA and μ BGA assemblies.
Glow Core 2.5% Wire	Excellent wetting, clear hard residues, shiny solder joints.

Water Soluble Tin/Lead Applications

Product	When to Recommend
WS483 Solder Paste	Default WS paste for tin/lead.
735 Flux	Default WS liquid flux. Best soldering and cleaning characteristics.
715M Flux	When a neutral pH/extended cleaning window is needed.
716 Flux	For use when a halide-free water soluble flux is required.
770 Flux	WS VOC-Free liquid flux.
730 Flux	Water based inorganic flux. Only recommended for lead tinning & dip soldering.
OAJ 2% Wire	Default for tin/lead applications.

Water Soluble Lead-Free Applications

Product	When to Recommend
WS353 Solder Paste	Default WS paste for lead-free.
735 Flux	Default WS liquid flux. Best soldering and cleaning characteristics.
715M Flux	When a neutral pH/extended cleaning window is needed.
716 Flux	For use when a halide-free water soluble flux is required.
770 Flux	WS VOC-Free liquid flux.
730 Flux	Water based inorganic flux. Only recommended for lead tinning & dip soldering.
WS482 3% Wire	For lead-free applications

Rosin Tin/Lead Applications

Product	When to Recommend
212 Solder Paste	Default RMA solder paste.
RMA202-25 Flux	Default RMA liquid flux.
RA301 Flux	Default RA liquid flux.
R.A.G.E. Flux	Rosin Activated Glycol Ether flux.
RMA 3% Wire	Default RMA wire.
RA 3% Wire	Default RA wire.

AIM RECOMMENDED PRODUCT INFORMATION

Rosin Lead-Free Applications

Product	When to Recommend
212 Solder Paste	Available but not recommended. Use a No-Clean Lead-Free Applications recommended product in its place.
RMA202-25 Flux	Available but not recommended. Use a No-Clean Lead-Free Applications recommended product in its place.
RA301 Flux	Available but not recommended. Use a No-Clean Lead-Free Applications recommended product in its place.
R.A.G.E. Flux	Available but not recommended. Use a No-Clean Lead-Free Applications recommended product in its place.
RMA 3% Wire	Available but not recommended. Use a No-Clean Lead-Free Applications recommended product in its place.
RA 3% Wire	Available but not recommended. Use a No-Clean Lead-Free Applications recommended product in its place.

Epoxy & Underfill

Product	When to Recommend
4044 Chip Bond Epoxy	Surface mount adhesive for dispensing and printing.
8088 Chip Bond Epoxy	Surface mount adhesive for dispensing and printing.
Underfill 621	Designed for use as a capillary flow underfill for flip chip, CSP, BGA and μ BGA assemblies.
Underfill 623	Designed for use as a capillary flow underfill for flip chip, CSP, BGA and μ BGA assemblies.
One-Step Underfill 688	A non-odorous, low surface tension, one component epoxy resin designed for flip chip, CSP, BGA and μ BGA assemblies.

Note: See Selection Flow Charts for additional solder paste and liquid flux selection criteria.

Bar Solder Products

- Produced in a process that results in lower oxide levels in bar solder, which leads to a lower drossing rate, fast barrel fill and excellent wetting, improved aesthetics, and a decrease of defects such as bridging, icycling and non-wetting.
 - **Tin-Lead:** Bars are packaged 25 pounds per box (20 kg per box in China); 10 lb margash bars are also available.
 - **Lead-Free:** Common alloys such as SAC305 and SN100C are triangular shaped and packaged 25 pounds per box; 10 lb triangular shaped margash bars are also available.

Cleaners & Accessory Products

- **Saponifiers:** [AIMTERGE 520A](#) (default) & [AIMTERGE 6035](#) (for long soaks and on aluminum).
- **Stencil Cleaners:** [200AX](#) (for hand cleaning only) & [DJAW-10](#) (for automated cleaners).
- **Common Flux Thinner**, used to thin IPA based liquid fluxes.
- **Titration Kit**, used to titrate low solids no-clean liquid fluxes.
- **Deox Powder**, used to reduce drossing in wave solder pots.

AIM Solder Paste Product Code

It is necessary to know the following part qualifiers when requesting a solder paste:

- **Paste:** **Sn63 NC254 90-T3 J5**. The breakdown of this code is:
 - **Sn63** refers to the alloy (Sn63/Pb37)
 - **NC254** refers to the flux medium type of the paste
 - **90** refers to the metal percentage (by weight) of the paste
 - **T3** = the solder particle size. Types 2 - 6 available (see chart)
 - **J5** refers to the packaging (500gr jar)

Solder Paste Powder

Mesh	IPC Type	For Pitch Size
-200/+325	T2	> 25 mil
-325/+500	T3	> 15-25 mil
-400/+635	T4	< 14 mil
-500/+635	T5	< 9 mil

AIM RECOMMENDED PRODUCT INFORMATION

Packaging

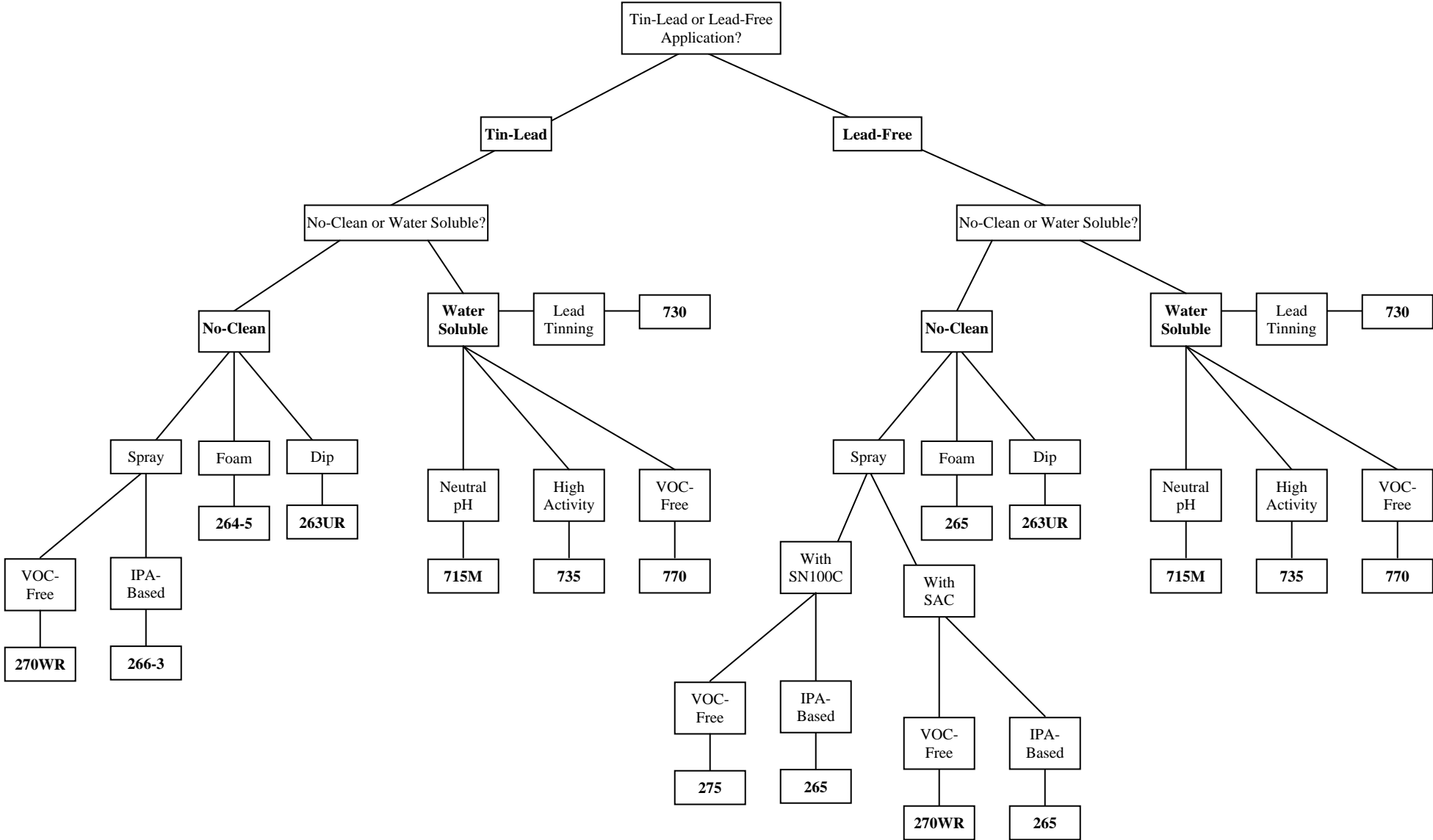
- **Paste:** Jars: 250gr, 500gr, 1kg; Cartridges: 6 oz/700gr & 12 oz/1.4kg (6 oz/600gr & 12oz/1.2kg for lead-free); DEK ProFlow cassettes; Syringes: 3cc, 5cc, 10cc, 30cc.
- **Flux:** 1 and 5 gallon jugs, 55 gallon drums, 8 ounce spray bottles, and flux pens. 1, 4, 20 and 205 liter containers also available. **Green containers for VOC-free fluxes.**
- **Wire:** Spool Sizes: ½ lb (.010" & .015" diameters), 1 lb, 5 lbs, and 25 lbs. Spools also available labeled in metric (grams and mm).
- **Lead-Free:** Green spools, jars, cartridges, and labels for bar solder boxes are available for lead-free solder products.

Tin-Lead and Lead-Free Packaging Identification

	Leaded	Lead-Free
Paste	White Jars	Green Jars
	Clear Cartridges	Green Cartridges
	Red End Caps	Green End Caps
	Pb-Warning Stickers	Pb-Free/RoHS Stickers
	Black Proflo Caps	Green Proflo Caps
Wire	Clear Spools	Green Spools
	White Box Labels	Green Box Labels
	Pb-Warning Box Stickers	Pb-Free/RoHS Stickers
Bar	Rectangular Bar	Triangular Bar
	Plain Margash Bar	Triangular Margash Bar
	White Box Label	Green Box Label
	Pb-Warning Box Stickers	Pb-Free/RoHS Stickers

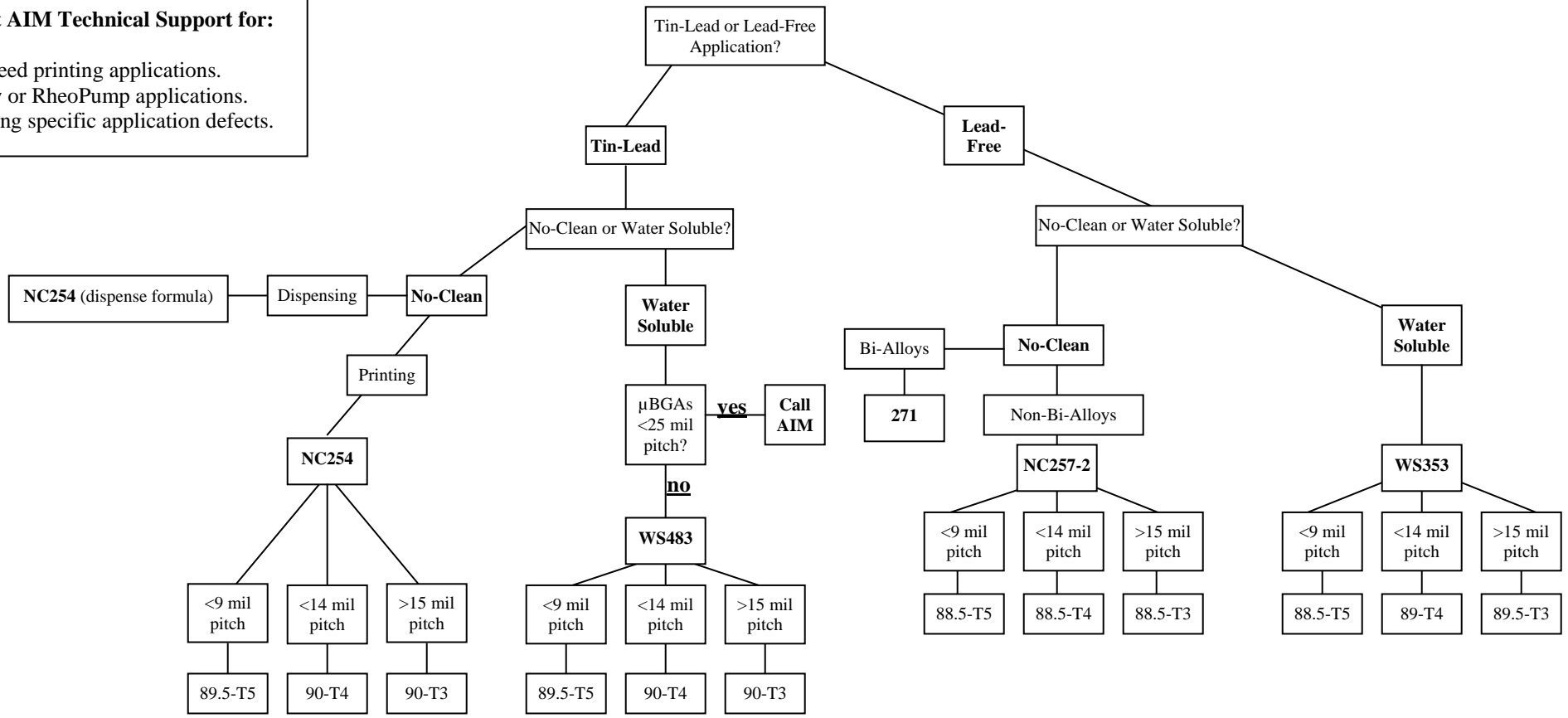
NOTE: These are typical starting guidelines only. To achieve optimal performance, actual product may vary per process, application, and environment. Other products may be used/recommended for various applications. Check with AIM technical department with any questions. Information contained herein is based on data considered accurate and is offered at no charge. No warranty is expressed or implied regarding the accuracy of this data. Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated.

WAVE SOLDERING LIQUID FLUX SELECTION FLOW CHART



SOLDER PASTE SELECTION FLOW CHART

Contact AIM Technical Support for:
 High-speed printing applications.
 ProFlow or RheoPump applications.
 Preventing specific application defects.



Note: The information below pitch relates to metal load and powder particle size. For example, "90-T3" = 90% metal, T3 powder size.