



## Soldering Process Solutions

SolderPlus<sup>®</sup> air dispensedPrintPlus<sup>™</sup> stencil printing paste

Automated SolderPlus dispensing

- *Customized Solder Paste Formulations*
- *Automated Solder Dispensing Systems*
- *Application Support and Service*

### NC No-Clean

No-Clean (NC) flux consists of rosin, solvent, and a small amount of activator. NC flux has low activity and is suited to easily solderable surfaces. NC residue is clear, hard, non-corrosive, non-conductive, and designed to be left on your assembly. Residue may be removed with an appropriate solvent if so desired.

### RMA Rosin Mildly Activated

Rosin mildly activated (RMA) flux consists of rosin, solvent, and a small amount of activator. Most RMA flux is fairly low in activity and best suited to easily solderable surfaces. RMA flux residue is clear, soft, non-corrosive, and non-conductive. Cleaning is optional. Residue may be removed with an appropriate solvent if so desired.

### RA Rosin Activated

Rosin activated (RA) flux consists of rosin, solvent, and aggressive activators. RA flux has higher activity than RMA for moderately oxidized surfaces. RA flux residue is corrosive and should be removed as soon as possible after reflow to prevent damage to your assembly. Maximum safe time before cleaning is product dependent. Residue may be removed with an appropriate solvent.

### WS Water Soluble

Water soluble (WS) flux consists of organic acids, thixotrope, and solvent. WS flux comes in a wide range of activity levels for soldering to even the most difficult surfaces. WS flux residue is corrosive and should be removed as soon as possible after reflow to avoid damage to your assembly. Maximum safe time before cleaning is product dependent. Residue may be removed with 60°C (140°F) water and 40 psi pressure.

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**The Best Materials**  
**+ The Best Tools**  
**= The Best Results**



*We listen and respond.*

## Solder Powder Sizes

SolderPlus is available in a range of particle sizes to match your application—from type II which is suitable for any deposit size of 0.030 inch and larger, to type V which can achieve 0.010 inch diameter deposits. For best performance, choose the largest powder size that can meet your needs.

Powder Type	Size (microns)	Mesh Count	Dispense Dot Diameter	
			(mm)	(inches)
II	75-45 $\mu$	-200+325	0.8	0.030
III	45-25 $\mu$	-325+500	0.5	0.020
IV	38-25 $\mu$	-400+500	0.3	0.012
V	25-20 $\mu$	-500+635	0.25	0.010
VI	15-5 $\mu$	NA	0.1	0.004

## Alloy Selection

Alloy	Solidus (°C)	Liquidus (°C)	Tensile Strength (psi)	Shear Strength (psi)
Sn42 Bi58	-E-	138	8000	NA
Sn43 Pb43 Bi14	144	163	6120	NA
Sn62 Pb36 Ag2	179	189	6700	6250
Sn63 Pb37	-E-	183	6700	6060
Sn60 Pb40	183	191	6200	5680
Sn96.5 Ag3.0 Cu0.5	217	219	NA	NA
Sn96.3 Ag3.7	-E-	221	8900	4600
Sn100	MP	232	1800	2560
Sn95 Sb5	232	240	5900	6200
Sn95 Ag5	221	245	10100	8400
Sn10 Pb88 Ag2	268	290	4900	4300
Sn5 Pb92.5 Ag2.5	287	296	4210	2240
Sn10 Pb90	275	302	4600	3900
Sn5 Pb95	308	312	4190	3000

-E-: Eutectic    MP: Melting Point    ■: Lead free

## Dispense Gallery: Automotive • Electronics • Telecommunications • Components

Flexible circuits



Wire harness



Transmission control



Fine pitch SMT



Resonator choke-cell phone



Transmission sensor



Pneumatic fittings



Connectors



Solenoids and switches



EMI shielding

Contact EFD for your specific soldering application.

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