

## No-Clean Pastes Available in Lead and Lead-Free Versions

MG Chemicals' solder pastes ensure strong adhesion when connecting PCB components to copper pads during board fabrication. Our solder pastes contain a non-conductive flux, making cleaning afterwards unnecessary, plus solder powder with a particle size distribution that complies with the J-STD-005 Type 3 (80% min. between 25-45  $\mu\text{m}$ ).

### Features & Benefits

- Leaded and non-leaded options available
- Alloy exceeds J-STD-006C and meets ASTM B 32 purity requirements
- No-clean residues, residues are not harmful to assemblies
- Flux meets J-STD-004B
- RoHS-compliant

### Applications

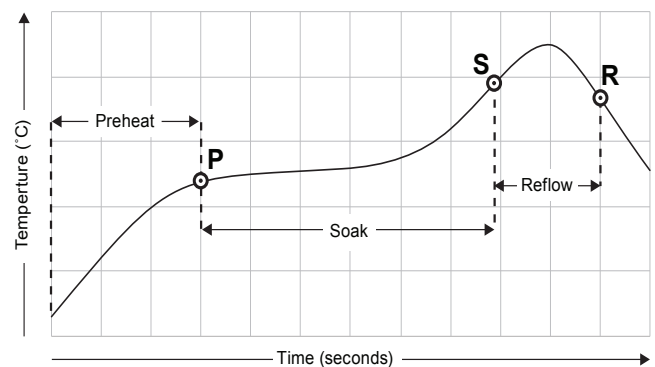
- Repairs and rework
- Through-hole and surface mount
- Solder touch-ups
- Component bonding

**4860P** — Sn63/Pb37 No-clean solder paste

**4900P** — SAC305 No-clean solder paste

**4902P** — Sn42/Bi57/Ag1 No-clean low temp. solder paste

### Typical Reflow Profile



	P (Preheat)	S (Soak)	R (Reflow)
4860P	120 °C @ 90 s	200 °C @ 270 s	180 °C @ 330 s
4900P	120 °C @ 90 s	200 °C @ 270 s	180 °C @ 330 s
4902P	115 °C @ 100 s	150 °C @ 155 s	130 °C @ 225 s

# Solder Pastes



	4860P	4900P	4902P
<b>PROPERTIES</b>			
Flux Classification	RELO	ROL0	ROM1
Flux Type	Resin	Rosin	Rosin
Flux Activity	Low	Low	Moderate
Copper Mirror	No removal	No removal	No penetration
Corrosion Test	Pass	Pass	Minor corrosion
Electromigration	Pass	Pass	4 x 10 <sup>9</sup> Ω @ 96 h 4 x 10 <sup>9</sup> Ω @ 596 h
Solder Ball Test	Pass	Pass	—
Slump Test			
@ 25 °C, 0.63 vert./horiz.	No bridges	No bridges	—
@ 150 °C, 0.63 vert./horiz.	No bridges	No bridges	—
@ 25 °C, 0.33 vert./horiz.	0.20/0.20	No bridges	—
@ 25 °C, 0.33 vert./horiz.	0.20/0.20	Pass	—
Viscosity, poise	850–110	1600–1900	153 000 cP
Acid Number (mgKOH/g sample)	100	117	142
Halides (by weight)	<0.05%	<0.05%	≤0.15%
Post Reflow Flux Reside	45%	5.5%	N/A
Metal Loading	88%	88.5%	N/A
Surface Insulation Resistance (SIR)	2.4 x 10 <sup>10</sup> Ω	2.0 x 10 <sup>10</sup> Ω	≥2 x 10 <sup>9</sup> Ω @ 96 h Pass @ 168 h
Bellcore (Telecordia)	4.1 x 10 <sup>10</sup> Ω	5.3 x 10 <sup>10</sup> Ω	N/A
Tack			
Initial	85 g	124 g	—
Retention @ 24 h	90 g	111 g	—
Retention @ 72 h	92 g	98 g	—

## AVAILABLE PACKAGING

Net contents	35 g (syringe) —	25 g (syringe) 250 g (jar)	15 g (syringe) 25 g (syringe)
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