

# Selective Soldering

## A Growing Wave Soldering Alternative



**Selective Soldering** is a method of soldering components to a printed circuit board in a way that is faster than hand soldering and consumes less solder than traditional wave soldering. It is becoming known within the industry as **one of the most effective soldering methods available**, and its usage continues to increase as assemblers transition away from other costlier soldering methods. Indium Corporation manufactures a number of products well suited for Selective Soldering applications.

### Primary Selective Soldering Fluxes

No-Clean Fluxes		
Rosin-Containing		
Common Name	Solids Content	Comments
WF-9948	3.26%	Low solids formula that will result in low residues post-soldering.
WF-9945	5.77%	Provides low residue and good solderability; a middle ground between WF-9948 and 3545.
3545	11.25%	Best for heavy/thick assemblies. Provides good solderability. Higher solids content results in more residue post-soldering. Also available as a flux pen, FP-500.
Rosin-Free		
WF-9958	4.99%	Low residue formula—lower thermal stability compared to rosin-containing options. Has good solderability.

General notes: • Increased solids = higher thermal stability (better for thicker boards)  
• Lower solids = lower residues and better pin test probability (cosmetics)

Water-Soluble Fluxes (listed by activity level, lowest to highest)		
Common Name	Solids Content	Comments
1082	14.46%	Halogen/halide-free.
1098	10.33%	Halide-containing, higher activity.

Product notes: • Cleaning for both products can be delayed for up to 48 hours.  
• Both products have been tested by Pillarhouse and showed no corrosion.

VOC-Free Fluxes (listed by activity level, lowest to highest)		
Common Name	Solids Content	Comments
WF-7745	4.22%	Halogen/halide-free.

General notes: • Will require longer preheating (same as wave soldering), can make it harder to use depending on the equipment.  
• Other selective soldering fluxes are available and may be recommended depending on the assembly and process.



### Solder Alloys

#### Solder Bar & Bar Chips Available in Commonly Used Alloys:

- SAC305
- Sn63Pb37 & Sn60Pb40
- Indalloy®291
- Sn995
- SAC0307

Contact our expert: [rmckerrow@indium.com](mailto:rmckerrow@indium.com)

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### Solid Solder Wire

Solid Wire for Selective Soldering		Common Alloys			
		Indalloy®291	Sn995	SAC305	Sn63
Common Diameters	0.078"/1.98mm	WIREOT-500178	WIREOT-54335	WIREOT-53338	WIREOT-53133
	0.118"/3.00mm	WIREOT-500093	WIREOT-52855	WIREOT-52418	WIREOT-52854
	0.125"/3.18mm	WIREOT-500245	WIREOT-53442	WIREOT-52441	WIREOT-50935

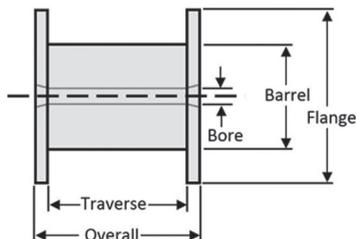
Other diameter (up to 0.125"/3mm) and alloy combinations are available.  
All available on 5-20lb spools.



### Available Spooling Options

Selective soldering machines can accommodate a number of spool sizes depending on the spindle shaft and spool bracketing dimensions. It is beneficial to identify the correct spool early on in the process to reduce turnover time and maximize efficiency. Below are the current spooling options from Indium Corporation.

Pack Amount	Bore	Barrel	Flange	Traverse	Overall	Kurtz-ERSA Machine Roller Style Compatibility	
						Spindle (U.S.) Style	Roller (European) Style
5lbs/2.2kg	.75" (19mm)	0.94" (24mm)	3.50" (90mm)	3.05" (77mm)	3.24" (82mm)	Yes	Yes
5lbs (2.2kg) to 8.8 (4kg)	0.63" (16mm)	3.15" (80mm)	4.921" (125mm)	3.937" (100mm)	4.921" (125mm)		Yes
15lbs (6.8kg)	0.632" (16mm)	3.50" (88.9mm)	6.00" (152.4mm)	3.50" (88.9mm)	4.04" (102.62mm)	Yes	
20lbs (9.1kg)	0.786" (20mm)	1.90" (48mm)	6.40" (163mm)	3.90" (99mm)	4.24" (108mm)	Yes	



Storage Conditions (unopened containers)	Shelf Life
≤85% Pb	10 years
>85% Pb	2 years

Always store solder wire in a cool, dry environment.

Contact our expert: [rmckerrow@indium.com](mailto:rmckerrow@indium.com)

Learn more: [www.indium.com/flux-cored-wire](http://www.indium.com/flux-cored-wire)

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