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Obtaining the precise amount of solder to ensure a stronger solder joint is critical in electronics manufacturing. However, miniaturization trends, such as the reduction of stencil thickness and more tightly fitted components, make this increasingly difficult. Solder Fortification® Preforms can provide the solution for these challenging issues.

Solder Fortification® Preforms are rectangular shaped pieces of alloyed metal that do not contain any flux. The preform is added to a deposit of solder paste using standard pick and place equipment. Since the alloy for both the preform and the solder paste are the same, the preform will reflow at the same temperature as the solder paste, with the solder paste providing the necessary flux. The preform increases the volume of solder above what could be achieved with just solder paste, especially for applications using stencils with a pitch of 0.3mm or less.

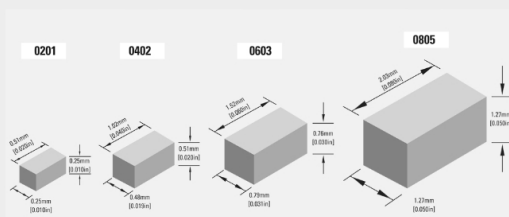


Advantages

The advantages of Solder Fortification® Preforms include:

- Stronger solder joints, which help improve drop test results
- Increased solder volume compared to what could be achieved with just solder paste
- Fewer issues with flux residue as the solder-to-flux ratio is increased
- Reduced rework and other manual processes to add solder volume
- Elimination of costly or time-consuming processes, such as wave soldering or selective soldering
- Improved shape and volume of fillet to ensure joints meet IPC specifications

Solder Fortification® Solution Options



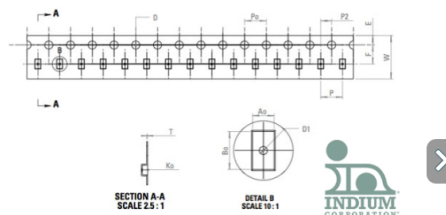
Name	Size	Quantity Per Reel		Example Weight: SAC305 (grams/ea)
		7"	13"	
0201	.010" x .020" x .010" (0.254mm x 0.508mm x 0.254mm)	1k	50k	0.00024
0402	.020" x .040" x .020" (0.508mm x 1.01mm x 0.48mm)	1k	15k	0.00182
0603	.030" x .060" x .030" (0.76mm x 1.52mm x 0.787mm)	1k	15k	0.00672
0805	.050" x .080" x .050" (1.27mm x 2.03mm x 1.27mm)	1k	15k	0.02410

DOWNLOAD SOLDER FORTIFICATION® DESIGN GUIDE

EMAIL US YOUR SOLDER FORTIFICATION® QUESTION

Packaging

Solder Fortification® Preforms are packaged in tape & reel for easy placement by standard pick and place machines. For more information on Solder Fortification® Preform packaging, download the design guide above.



Alloys

Solder Fortification® Preforms are available to deliver a precise amount of solder in virtually any alloy to correspond to the alloy in the solder paste.

Common alloys include:

- SAC305 and SAC387
- Sn63 and Sn62
- BiSn and BiSnAg

Technical and Customer Support

Selecting the right solder alloy, form, and dimensions are key to producing a quality end product. Indium Corporation can provide a wide variety of alloys, prototype to production quantities and optimized packaging for your specific application.

Our engineers offer:

- A thorough understanding of each customer's needs and applications
- A seasoned problem-solving attitude
- Knowledge of manufacturing processes and materials handling requirements

- Expertise in metal fabrication, product packaging, and customer satisfaction

Try our new Process Optimization Calculators and then contact our technical support engineers to discuss how to improve your results.

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From One Engineer To Another®

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