

# APPLICATION NOTE

## Information That Should Appear on a Print, Drawing, or Specification

It is advisable that as much information as possible appears on a print, drawing, or specification for an engineered solder (preform, ribbon, wire, etc.). This ensures that the solder manufacturer understands exactly what you (the customer) are expecting to receive from them.

### What is Typically Needed

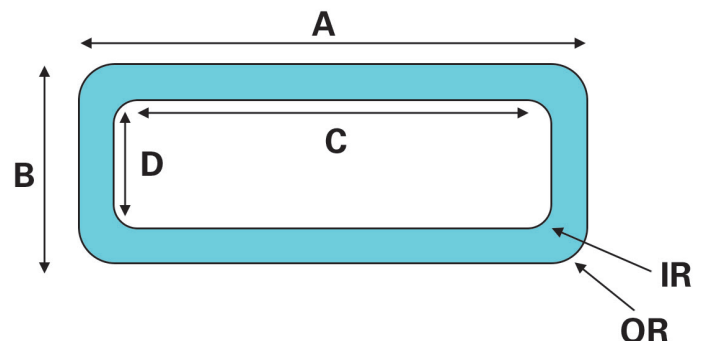
- **A drawing showing the geometry of the part:** If the geometry is very basic, words such as "wire," "disc," "square," "rectangle," etc., often will suffice. Drawings depicting complex geometries (anything other than simple square, discs, rectangles, or washers) need to be submitted with either a .dxf or .dwg file.
- **A fully-dimensioned drawing:** These dimensions can be located at or superimposed over the area of the print showing the geometry of the part. They can also be included in table form. A wire, which may have only a diameter as a critical dimension, can be included as a note on the print. Dimensions for radii (if appropriate) and thickness also need to be specified on the print. Units must be identified on the print, as well, such as inches (") or millimeters (mm).
- **Tolerances:** It is a good idea to include tolerances somewhere on the drawing for the X and Y dimensions as well as the thickness if you are expecting a certain dimensional range for the part. Otherwise, the solder manufacturer will typically default to their "in-house" tolerances. In-house tolerances may or may not meet your expectations.
- **Flux coating:** If the part requires a flux coating, the type of flux coating and amount (by weight) should appear on the print. Please note that dimensions for flux-coated parts are prior to flux coating.

Dimensions and Specifications	
A	3.000"
B	1.000"
C	2.500"
D	0.500"
IR x 4 places (inner radii)	0.050"
OR x 4 places (outer radii)	0.100"
Thickness	0.005" +/- 0.001"
Tolerance	+/- 0.025"
Flux Coating (Type & %)	1% NC-7
Pack Method	Tray

- **Pack method:** A solder manufacturer should know the proper way to package a product. However, if you expect or require a certain type of packaging, this should be mentioned on the print. Otherwise, the manufacturer will default to their discretion. Pack methods include spools, boxes, bags, waffles, trays, tape & reel, tubes, etc.
- **Company name:** Your solder supplier deals with thousands of prints from hundreds of customers every year. Having your company name on the print ensures that the print is properly filed and easily located.
- **Drawing number or name:** Every print should have a unique number or name to avoid confusion. You will likely be creating more than one solder print during the life of your company. This will help the solder supplier to not confuse your prints.
- **Revision:** Prints sometime get changed, modified, or amended. A revision helps identify the chronology of changes and the most recent version.
- **Material:** There are several hundred solder alloys in existence. Do not assume that words like "RoHS," "SAC," "Pb-free," or "silver solder" are explicit enough. It is best to use the alloy composition or trade name. Also, specify an alloy purity or purity specification (e.g., J-STD-006) if it is critical to the application.

Shown are examples of the type of information that should appear on a print, drawing, or specification.

Company name	ABC Company Name
Drawing name or number	Top Lid Sealing Frame
Revision	B
Material	97In3Ag (Indalloy®290) 99.9% Purity
Signature and date	John Doe October 24, 2012



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All of Indium Corporation's solder paste and preform manufacturing facilities are IATF 16949:2016 certified. Indium Corporation is an ISO 9001:2015 registered company.

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