PRODUCT DATA SHEET

CW-908

Aluminum-Cored Solder Wire

Introduction

CW-908 Aluminum-Cored Solder Wire is specifically designed for soldering to aluminum and aluminum alloys. Aluminum is a metal that it is hard to solder due to the high surface tension difference between it and molten solder alloy. This occurs because aluminum rapidly forms a tenacious oxide layer whenever it is exposed to air. The oxide layer impedes the solder from spreading evenly on an aluminum surface. Special fluxes are required to remove the oxide and to prevent it from reforming.

Features

- Specifically designed for soldering to aluminum and aluminum alloys
- No zinc chloride
- Water rinse necessary to remove flux residue after soldering
- Not suitable for electrical or electronics applications

Compatible Solder Alloys for Aluminum Bonding

Aluminum flux can be used with certain solders to directly solder aluminum. Most solder alloys 180–315°C are capable of bonding to aluminum, including tin-zinc, tin-silver, tin-lead-silver, and tin-copper alloys. Indium Corporation has chosen the three lead-free alloys listed above as the preferred offering. While SnZn alloys are compatible with aluminum, they are incompatible with the **CW-908** flux and, therefore, are not available. High-temperature lead-containing alloys are compatible with both aluminum and the flux, but we have limited application for them at this time.

Commonly Available Diameters and Packaging

Metric Units				English Units			
Diameter	Spool Weight	SAC305 Length	63Sn/37Pb Length	Diameter	Spool Weight	SAC305 Length	63Sn/37Pb Length
.25mm ± .03	125g	368m	324m	.010" ± .001"	1/4lb	1,097ft	966ft
.40mm ± .05	125g	164m	144m	.015" ± .002"	1/4lb	487ft	429ft
.50mm ± .05	500g	368m	324m	.020" ± .002"	1lb	1,097ft	966ft
.60mm ± .05	500g	236m	208m	.025" ± .002"	1lb	702ft	618ft
.80mm ± .05	500g	144m	127m	.032" ± .002"	1lb	428ft	377ft
1.00mm ± .05	500g	92m	81m	.040" ± .002"	1lb	274ft	242ft
1.55mm ± .05	500g	38m	34m	.062" ± .002"	1lb	114ft	101ft
Standard Flux Percentage							
3%				2.7 to 3.2%			

Preferred Lead-Free Alloys

- 96.5Sn/3.5Ag
- 97Sn/3Cu
- Sn995

Residue Removal

Due to the corrosive nature of this flux residue after soldering, **CW-908 Aluminum-Cored Solder Wire** requires removal of the flux residue. Complete residue removal can be accomplished by a chemical neutralizer rinse followed by several water washings. A first rinse in water with the addition of 2–3% HCl, while not absolutely necessary, helps remove flux residues and facilitates better second- and third-stage cleaning. All flux residues should be thoroughly removed to prevent corrosion.

Storage

CW-908 Aluminum-Cored Solder Wire has a shelf life of 2 years when stored in a dry, non-corrosive environment, such as a low-humidity dry cabinet. Direct sunlight, excessive humidity, and storage near heat sources should be avoided.

Technical Support

Indium Corporation's internationally experienced Technical Support Engineers provide in-depth technical assistance to our customers and rapid response to all technical inquiries.

Safety Data Sheets

The SDS for this product can be found online at http://www.indium.com/sds

From One Engineer To Another®

Contact our engineers: **askus@indium.com**

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