

SAC305 Pure Core Wire Solder

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Type H3C per IPC-SF-818

General description:

The solder wire is made by Pure Core flux and Sn/Ag/Cu alloy, including SAC305(Sn96.5/Ag3.0/Cu0.5), SAC405(Sn95.5/Ag4.0/Cu0.5), SAC355(Sn96.0/Ag3.5/Cu0.5), or various Sn/Ag/Cu alloy.

Pure Core is an organic activated, water soluble flux that meets the Corrosion Resistance Test and Surface Insulation Resistance requirements for Type H3C fluxes per IPC-SF-818. Pure Core contains a water soluble resin derivative of rosin and a buffered organic activation system. This efficient flux produces bright, shiny solder connections, even if cleaning is delayed for several days.

Pure Core is recommended for use in any electronic hand soldering application where high fluxing strength and water cleanability are desired. Its low smoke and odor characteristics make it particularly suited for touch-up and repair of printed circuit boards where personnel are in close contact with the product.

The very effective activator system enables the flux to penetrate even heavily tarnished surfaces among the following materials: Beryllium Copper, Brass, Bronze, Cadmium (Plate), Copper, Lead, Nickel (Plate), Silver, Solder (Plate), Solder (Hot Dip), Terns (Plate), Tin (Hot Dip), and Tin (Plate).

Companion Liquid Flux Product:

Alpha 870 series water soluble resin flux.

Alloy composition:

1. Major composition:

alloy	SAC305	SAC405	SAC355
composition	Sn96.5/Ag3.0/Cu0.5	Sn95.5/Ag4.0/Cu0.5	Sn96.0/Ag3.5/Cu0.5
Sn%	Rem.	Rem.	Rem.
Ag%	3.0%± 0.2%	4.0%± 0.2%	3.5%± 0.2%
Cu%	0.5%± 0.1%	0.5%± 0.1%	0.5%± 0.1%

2. Impurity specification:

element	Pb	Al	As	Au	Bi	Cd
spec.	≤ 0.10%	≤ 0.002%	≤ 0.03%	≤ 0.05%	≤ 0.10%	≤ 0.002%
element	Fe	In	Ni	Sb	Zn	---
spec.	≤ 0.02%	≤ 0.10%	≤ 0.01%	≤ 0.12%	≤ 0.002%	---

Flux content:

P1(1.2%), P2(2.2%), P3(3.3%)

Technical property:

Physical Properties	Typical Values
Physical State	Waxy-Solid
Flux Type	Organic, water-soluble resin
Water Extract Resistivity	> 20,000 ohm-cm
Typical pH (5% aqueous solution)	6.8 ± 0.5
Residues	Water soluble, biodegradable



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Residue removal:

The post soldering residues of Pure Core are fully soluble in water. Even after several days, flux residues remain water soluble and no corrosion products are visible. Cold water soaking can be used; however, hot water will greatly accelerate the cleaning process. Additionally, Pure Core flux residues can be removed in conventional solvent vapor cleaning processes employing solvent blends such as 565, as well as semi-aqueous processes employing terpene-type cleaners such as Bioact EC-7.

Water effluent is neutral which eliminates the need for pH adjustment prior to disposal. However, local regulations may require pre-treatment to remove dissolved metals from water effluent.

Diameter(mm):

0.30± 0.05; 0.40± 0.05; 0.50± 0.05; 0.60± 0.05; 0.64± 0.05; 0.80± 0.05; 1.00± 0.10; 1.20± 0.10; 1.60± 0.10; ... etc.

Package:

- A. 1 LB spool: 1 LB/reel, 24 pcs/box, 24 LB totally.
- B. 0.5 kg spool: 0.5 kg/reel, 24 pcs/box, 12 kg totally.
- C. 2 LB spool: 2 LB/reel, 20 pcs/box, 40 LB totally.
- D. 1 kg spool: 1 kg/reel, 20 pcs/box, 20 kg totally.

Labeling:

Print alloy type, flux type, flux%, diameter, lot number, net weight.

Shelf life:

3 years, storage under 0°C~43°C.

Health & safety:

Pure Core is not considered toxic, however, its use in typical soldering processes will generate a small amount of decomposition and reaction product fumes, which should be vented. The effluent for Pure Core post solder cleaning systems should be analyzed for dissolved metals.

Please refer to the material safety data sheet as the primary source of health and safety information.

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