

**FORCE
INDUSTRIES
DIVISION**

American Solder & Flux Co., Inc. □ 28 Industrial Boulevard □ Paoli, PA 19301-0947 □ (610) 647-3575 □ FAX (610) 647-2375

PRODUCT INFORMATION

AMCO 66A

(590)

General Characteristics and Uses

AMCO 66A flux is a reaction-type flux recommended for high-temperature soldering of aluminum. It deposits zinc on the aluminum surfaces when heated to soldering temperature. The solder must be preplaced prior to heating because of the short flux reaction time. A typical use is in soldering of air conditioning coils.

Physical Data

- | | |
|-------------------------------------|---|
| • General description | Consists of inorganic chlorides and fluorides |
| • Color | White |
| • Density, molten at 490 °F | 2.4gms/cc (149 lbs/ft ³) |
| • Melting range | 290 – 460 °F |
| • Solubility | |
| ○ Water | 98 – 99% Moderate |
| ○ Ethanol, n-propanol,
n-butanol | Moderate |
| • Effect of exposure to | |
| ○ Air | None |
| ○ Water | None, but absorbs moisture from air |
| ○ Strong oxidizers | None |
| ○ Heat & fire | Zinc chloride fumes and, in presence of water
vapor, HCl and possibly HF |
| • Corrosivity | Corrosive to steel, soldering joints and surrounding
metal |

Application

- Normal propyl or normal butyl alcohol is added to the dry flux to make a slurry (approximately 70 weight percent flux – 30 weight percent vehicle) that is applied to the joint area. Methyl ethyl ketone and isopropyl alcohol have been used with AMCO 66A flux with varying degrees of success, but these are not recommended vehicles. The flux/vehicle ratio can be varied to facilitate automatic dispensing. Flux mixtures in dispensing devices should be continuously stirred and protected from moisture.
- AMCO 66A flux melts in the temperature range of 290 - 460 °F and chemically reacts with aluminum at approximately 720 °F. The recommended soldering range for AMCO 66A flux is 720 – 800 °F. Zinc-aluminum solders are recommended for use with AMCO 66A. These include: 95Zn – 5Al, 98Zn – 2Al, and pure Zn solders.

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PRODUCT INFORMATION

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continued (590)

Application (*continued*)

- AMCO 66A flux slurry can be applied to a joint area by many methods, including brushing, spraying, or dip coating. Joints are soldered by heating with flame, hot air or infrared heat sources. Assemblies can also be processed in a furnace. Heat must not be preferentially applied to the fluxed joints since premature flux reaction will occur before the aluminum part has reached soldering temperature.

Residue

- Flux contains chloride salts that will promote corrosion of the aluminum assembly if not removed. Complete removal of flux residues is necessary. A thorough hot water washing will remove AMCO 66A flux residues after soldering.

Caution

- AMCO 66A flux is manufactured in a closely controlled low-humidity environment. The dry powdered flux is hygroscopic. **The flux containers should be kept sealed when not in use.**

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