

ENVIRO/Flow HAL-40

A Non-foaming, Non-drying Hot Air Leveling Fusing Flux

Product Description

ENVIRO/Flow HAL-40 (HAL-40) is a medium - high viscosity hot air solder leveling flux designed to assure rapid and complete soldering of printed wiring boards processed through Argus™ vertical hot air leveling equipment. HAL-40 will remove light copper oxides, deposit a non-evaporating protective film on the copper to minimize copper reoxidation prior to solder leveling, maximize solder wetting of the copper by reducing the surface tension at the copper/solder interface, and enhance the reflectivity of the solder finish. Additionally, HAL-40 will reduce solder adhesion to the laminate and/or soldermask, minimizing solder tailings and/or webbing sometimes encountered during hot air leveling. HAL-40 is COMPLETELY water soluble, low foaming, free rinsing, and contains no glycol ethers, solvents, or activators which could attack solder mask or the laminate “buttercoat”.

Performance Features

- ENVIRO/Flow HAL-40 removes copper oxides and deposits a non-evaporative film over the copper resulting in a stable, clean solderable copper surface.
- ENVIRO/Flow HAL-40 reduces the surface tension at the copper/solder interface resulting in excellent solder coverage and appearance free of solder tailings or solder webbing.
- ENVIRO/Flow HAL-40 is completely water soluble and free rinsing.
- ENVIRO/Flow HAL-40 is a low acid formulation minimizing equipment wear.
- ENVIRO/Flow HAL-40 does not contain glycol ethers or activators which could attack soldermask or laminate.

Physical Specifications

Physical state.....	liquid
Appearance.....	transparent - light amber solution
Odor.....	slight
Freeze/thaw stability.....	protect from freezing
Specific gravity.....	1.1
Flash point.....	greater than 600° F
pH.....	< 3

Equipment Requirements

ENVIRO/Flow HAL-40 is compatible with all types of plastic, elastomers, and stainless steel employed by standard fluxing equipment. HAL-40 is not compatible with mild steel or aluminum.

Product Make-up

ENVIRO/Flow HAL-40 should be used as received. DO NOT DILUTE WITH WATER OR ALCOHOL.

Operating Parameters

ENVIRO/Flow HAL-40 can be applied with a standard flux applicator. (It is not necessary to heat ENVIRO/Flow prior to use.)

Replenishment

The solution level should be maintained by adding fresh HAL-40 solution. The addition of water and/or isopropyl alcohol is not recommended.

Safety and Handling

ENVIRO/Flow HAL-40 is mildly acidic and CORROSIVE, and should be stored accordingly. Precautionary measures including eye and face shields, and rubber gloves, boots, and aprons should be worn when handling this material. It is strongly recommended that contact lenses not be worn when working with chemicals because they may contribute to the severity of an eye injury. In case of external exposure, flush the effected area with plenty of water. Contact a physician if any irritation persists. In case of ingestion, dilute by giving the patient several glasses of water or milk. Do not induce vomiting. Contact a physician immediately.

Waste Treatment

Spent or unused HAL-40 is CORROSIVE and can be reused as a secondary fuel. In some cases spent or unused material can be combined with spent fusing fluid for use as a secondary fuel.

Ordering Information

ENVIRO/Flow HAL-40 is available in 5 gallon pails and 55 gallon drums.

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