SM-462-3

ALPHA 373
NEUTRAL WATER-SOLUBLE FLUX

DESCRIPTION

ALPHA Neutral Flux 373 is a water removable liquid soldering flux used in the mass soldering of printed circuit boards. The organic activating systems in **ALPHA** neutral fluxes have a neutral pH at room temperature and become activated with elevated temperatures of the soldering process. **ALPHA Neutral Flux 373** formulation provides a broad preheat range, low smoke, low odor and does not foam in cleaning systems using soft or deionized water.

APPLICATION

Primarily for foam application and conveyorized soldering, **ALPHA Neutral Flux 373** can be spray, dip, wave or brush applied. Flux applicators and reservoir should be plastic or titanium only.

Flux coated surfaces should be preheated to provide optimum wicking and solder joint formation. The degree of preheat is dependent on many variables, such as conveyor speed, type of components and substrates. Entering the solder wave with a topside temperature in the 170-200°F range is typical.

CONTROL

The foam applicators should be supplied with compressed air, free of oil and water. Maintain flux fluid level sufficiently above the aerator stone to produce adequate foam height. Adjust air pressure to produce optimum height with foam consisting of small uniform bubbles. During use, the specific gravity of the flux should be checked periodically. This can be accomplished with a hydrometer, i.e., **ALPHA** Specific Gravity Kit (EQ030). Evaporated solvent should be replenished by the addition of flux thinner.

In time, debris and other contaminants will accumulate in the flux. For consistent soldering performance, replace flux periodically. After dumping used flux, the reservoir and aerator stone should be thoroughly cleaned with flux thinner. Refill flux reservoir with fresh flux and allow a few minutes for foam to stabilize before resuming solder operation.

REMOVAL

After soldering **ALPHA Neutral Flux 373**, residues must be removed. Removal can be accomplished by multi-zone conveyorized in-line spray systems, automated batch spray systems (dishwashers) or multi-stage batch tank cleaning. Multiple zone in-line systems equipped with quality tap or conditioned water, an effective air knife and drying capacity, will produce MIL-P-28809 ionic cleanliness levels.

ALPHA Neutralizer 2051 series or the **LONCOTERGE®** series of saponifiers will improve the removal of flux residues, aqueous spot masks, and other soils, particularly when cleaning in a batch system or other cleaning equipment with limited cleaning zones.

5-20-10

PHYSICAL PROPERTIES

PARAMETERS	TYPICAL VALUES	TEST METHOD
Specific Gravity @ 25°C	0.842 ± 0.005	5-6-80-CC
Pounds per Gallon	7.01	Calculated
Solids Content wt/wt	24%	Calculated
Flash Point	56°F	6-23-81-BB
Flux Type	Organic Acid (Neutral)	
pH	7.0 ± 0.5	2-18-92-MP
% Chloride	2.1 ± 0.2	2-4-81-MP
Flux Thinner	Thinner 425	
Container Size	55 Gal 5 Gal. 1 Gal.	
Classification: ORH1	IPC J -STD-004