



ZCF™ - Zinc Chloride Free Flux

EUTECTIC - Works at the lowest temperature.

STRONG SOLDERED JOINTS - Reduces comebacks.

ZINC FREE - No toxic metals added to your waste water.

UNIVERSAL - Works with lead containing and lead-free solders.

SAFER - Not a skin sensitizer. Less irritating to nasal passages.

LOW RESIDUE - Rinses easier. No "greening" of copper or brass.

CONTAINS NO ZINC: ZCF Soldering Flux is a unique formulation containing no zinc or tin. Zinc is the most difficult heavy metal to remove from waste water. Eliminate zinc at the source with ZCF, and end your compliance problems.

LESS IRRITATING: ZCF is much less irritating to the skin, eyes and nasal passages than other fluxes. Persons who have become sensitized (allergic) to zinc chloride are now able to solder without skin rashes and sores. With an acid content of only three-tenths of one percent the fumes are much less irritating to the nose and throat. The flux has a peculiar, somewhat fruity odor, but is much preferable to acid or chloride fumes. An exhaust system is still required to meet OSHA standards for airborne lead.

LOW RESIDUE: The flux is very soluble in water and rinses free much more easily than zinc chloride residues. Any residue that may remain is neutral and will not cause pinhole leaks or "green" corrosion like chlorides will. This is especially useful when "flame baking" cores, assembling new completes, or rebuilding radiators for storage and later sale. Cores and completes stay in their "like new" condition longer, reducing customer complaints and comebacks and your labor to clean or repair them.

LOW TEMPERATURE ACTIVATION: ZCF is not activated until heated. Upon heating to about 150° the flux cleans the metal before the melting point of the solder has been reached. This prevents solder waste due to run-off over dirty metal. The molten solder flows very well and penetrates all joints for tight connections. Solder flow is better than many zinc chloride fluxes.

HIGH TEMPERATURE PERFORMANCE: The major drawback of other non-zinc fluxes is that they evaporate too quickly. This is because they volatilize at too low a temperature. The unique

composition of ZCF prevents volatilization until the melting point of the solder is reached. This means the metal cannot reoxidize before the solder melts. Usage of flux is dramatically reduced with ZCF compared with other non-zinc fluxes.

MANUFACTURING: ZCF is the perfect flux for "flame baking" of cores. It won't turn green yet doesn't evaporate too quickly like traditional baking fluxes. It is also the choice of many shops to assemble completes including tank to header, filler neck, drain cock, and oil cooler connections. These cores and completes will not turn green or develop pinhole leaks on the shelf. Problems due to corrosion are reduced by 80 to 90 percent over zinc fluxes. The flux may be used for dipping, but the acid content is too low to penetrate oil based cutting fluids.

PERFORMANCE: Considering it's safety and low corrosion features, you might expect ZCF to be a poor flux. Actually many users prefer ZCF to regular zinc chloride flux because solder flows faster and smoother. Finished work looks nicer, too. If ZCF works better why hasn't it replaced zinc chloride? The one drawback is that the use cost is higher than zinc chloride fluxes. However, no zinc chloride flux can match the combination of safety, non-polluting, non-corrosive and smooth flow features that result from this fine flux.

DIRECTIONS: Use from full strength to 1:2 dilution. Apply by brushing, spraying or dipping. Use as you would any zinc flux. Rinsing is not required, but will improve results in some cases.