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## Product Data Sheet

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**PRODUCT #:** N9100

# ***THERMO FLO™***

Leveling/Fusing Fluid

**DESCRIPTION:** A synthetic, water soluble fusing fluid that has been custom blended for tin/lead fusing and leveling. Additives for greater thermal stability increase the bath life and reduce smoking. **THERMO FLO™** maintains a high level of performance, providing an excellent surface finish with complete edge coverage throughout its bath life.

**BENEFITS:**

- Provides consistent surface smoothness and excellent edge coverage excellent fusing characteristics
- Easy rinsing
- Long life, good thermal stability
- Improved working conditions - low smoke characteristics

**SPECIFICATIONS:**

<b>Density:</b>	1.08 gm/ml, 9.0 lbs./gal.
<b>Flash Point:</b>	>545°F
<b>Shelf life:</b>	Indefinite

**INSTRUCTIONS:** Use as supplied. **THERMO FLO™** is designed for use in hot oil pots. Pour **THERMO FLO™** into oil pot and heat to 400°-450°F. Actual operating temperature should be established based on tin/lead ratio and local operating experience. A flux should be used, such as **ACTI FLO** or **291 FLUX** to enhance fusing characteristics.

**THERMO FLO™** is easily removed from board surfaces by a warm water spray or soak rinse. For greater cleanliness, follow with 3-5% **RINSE AIDE-90**, or 10% **RINSE AIDE-95**, in a recirculating spray rinse.

When carbonaceous material builds up to make rinsing difficult, product should be dumped. For prolonged life, 10% of used product may be removed and fresh **THERMO FLO™** added.

**DISPOSAL:** Disposal of this product may be done by incineration or landfill use. For waste water treatment, treat for nonionic surfactants. See waste treatment guidelines on the reverse side.

## Waste Treatment of Spent Fusing/Leveling Fluids

These products are not "oils", they are blends of polyglycols and non-ionic surfactants. They are infinitely soluble in water.

Chemelex<sup>®</sup> fusing/leveling fluids are not volatile at room temperature. When used at the recommended operating temperatures, there is some thermal degradation of the ethoxylated polymers. The volatiles given off from the fusing fluids at operating temperatures are acetaldehyde and acetic acid, and as such should meet normal air emission standards.

Dispose of in accordance with all local, state and federal regulations.

The spent material should be analyzed for concentration of metals. Typical analysis has been:

Less than 10 PPM of copper  
25-300 PPM of lead

### ***TREATMENT:***

1. Dilute spent fusing fluid at least 20:1 with water.
2. Add ferrous sulfate (less than .5% of total weight is needed).
3. Raise pH to 8 with caustic soda.
4. Add polyfloculant.
5. Let settle.
6. Decant liquid to drain (should contain less than 1 PPM of lead).
7. Dispose of sludge to appropriate landfill site handling lead containing waste.

Fusing fluids can be treated in normal caustic precipitation waste treatment plants. They should be diluted with water or trickled in slowly to avoid problems with the high surfactant level.

This product should be used only for its intended purpose. The information stated above is based on our laboratory tests and experience, and is accurate to the best of our knowledge. Since actual use is beyond our control, the recommendations or suggestions are made without warranty, expressed or implied.