

# **ALLEN AVIONICS, INC.**

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## TECHNICAL DATA SHEET January 1, 2010

PART NUMBER: HT175 EPOXY INK

This information is believed to be reliable, but the suitability of the products must be judged by the individual user. They are subject to change without notification or obligation. No warranty or liability by ALLEN AVIONICS, INC. or results obtained is expressed or implied.

The HT175 ink series is an epoxy-based, two component, heat curing, semi-paste ink for application by direct or offset printing with plate or reservoir equipment onto substrates including glass, metal, epoxy, phenolic, polyester, and other non-porous surfaces.

### DRYING/CURING:

The recommended curing conditions are 121 degrees Celsius for 2 hours, or 149 degrees Celsius for 15 minutes, or 176 degrees Celsius for 5 minutes. The curing time begins once the substrate has reached the curing temperature. Substrate material, ink thickness, and oven temperature will affect the curing time. An industrial oven with forced vented air is recommended.

### ACCESSORY CHEMICALS:

Use only Allen Avionics CL120 Cleaner to remove ink from machine and other parts which come in contact with ink. Other solvents may cause damage to rollers and pad. Use only Allen Avionics rollers. Other rollers may shorten life of ink machine.

### SHELF LIFE: Six Months

The shelf life begins on the month following this shipdate. Optimum storage condition is between 5 and 10 degrees Celsius in the original unopened container. Allow ink to warm gradually to room temperature before use.

### OTHER TECHNICAL DATA:

- Epoxy ink may be stripped from some substrates by heated acidic solutions including solder fluxes.
- Surface tension measurements (in dynes/cm): Black = 37

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Cured prints of inks in this series have shown good resistance to the following conditions after application in accordance with ALLEN AVIONICS, INC. recommended procedures:

- > solvents, including those specified in MIL-STD-883C Method 2015.8, MIL-STD-883D Method 2015.8, and MIL-STD-202F Method 215E.
- > RMA solder flux, 500 degrees F solder, then cleaning with water, 1-1-1 trichloroethane, ethanol, or methanol.
- > soaking in water and gasoline as described in Federal Specification TT-I-1795A.
- > thermal shock as described in MIL-M-13231C.
- > salt atmosphere for 48 hours.

Inks in this series contain a fungicide recommended for preventing fungal growth, and/or have been tested by an independent laboratory and reported to comply with MIL-STD-810 method 508 (revision current at the time of testing). HT175 inks are heat resistant to approximately 300 degrees Celsius. Some discoloration may occur after a few hours at this temperature. At 400 degrees Celsius the resin will discolor rapidly and the ink will lose its integrity after one hour.

#### IMPORTANT NOTES

The materials used in formulating this product may present health or safety hazards as defined by the OSHA Hazard Communication Standard. Always consult the Material Safety Data Sheet for specific hazard information before using this product.

The performance (transfer, adhesion, and permanence) of any ink is directly related to the cleanliness of the surface being printed. The surface must be free of all foreign matter or contamination.

Please contact ALLEN AVIONICS, INC. directly, for assistance with custom colors, application questions, related inks for other application methods, or any other application questions.

November 22, 1993