




## TISHFRC649B

### STEAM OR DRY HEAT STERILIZATION INDICATING INK

**Initial Color = Red/Pink**  **Signaled Color = Brown (DRY)**  **Black (STEAM)** 

DRY = Dry Heat Sterilization; STEAM = Steam Sterilization

This easy to apply, easy to clean up ink is designed to produce a flexographic print capable of functioning as a **Type 1 Chemical Indicator** for steam or dry heat sterilization processes.

Technical Data Sheet #649B	
PHYSICAL PROPERTIES	
Specific Gravity	1.1
Typical Viscosity (Brookfield -RVT, #3 spindle @20RPM)	1325 cps
VOCs	5.3 lbs/gal 635 g/L
Typical Wt. % Solids	48
APPLICATION GUIDELINES	
Application Method	Flexographic
Recommended Anilox	100 lines/inch (40 lines/cm)
Drying Temperature	110° F - 125°F (43°C -52°C)
Press Speed	200-400 ft/min (60-120 m/min)
Substrate	Paper, Tyvek®, Film
Thinner	Ethyl Acetate, IP-Acetate
Package quantities available	9lb (4.1 kg); 45lb (20.4kg)
Warranty Period	6 months from date of shipment

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#### Directions for Use

There are similarities between sterilization inks and other graphic printing inks. However, there are differences that impact the ink's performance. For example; to achieve the signal change of the Chemical Indicator, the amount of ink typically required is greater than the ink printed for the same size graphic image. Please follow provided guidelines and contact our technical support for additional assistance.

1. Bring ink to room temperature before printing.
2. Thoroughly mix the ink, using a mechanical method such as a drill with a dispersion blade, for at least 20 minutes. This helps ensure the ink is fully homogeneous and that all solids are incorporated in the solution. To check that the ink is completely homogenous use a wooden stick to probe for any ink solids that may remain on the bottom of the container. Failure to properly mix the ink may result in poor or inconsistent signaling.
3. A recommended thinner may be added for adjusting viscosity up to 5% at a time:  
Note: Thinning the ink may impact functionality. Confirm initial and signal colors with each thinner addition.

#### Thinner: Ethyl Acetate, IP-Acetate

Do not mix in any additives as they may interfere with the chemical reaction that causes the color change; contaminants risk changing the ink chemistry.

4. Be sure to wash all cleaning fluid off any area of print press that will contact ink; cleaning fluids can cause ink chemistry change.
5. Ensure that during the printing process, ink in the fountain is stirred continuously to avoid solids depositing on the bottom of the tray.
6. Viscosity should be monitored on a regular basis, typically 30 to 60 minute intervals.
7. Use best quality substrates.
8. Always run a sterilization test prior to a full run.
9. It is critical to ensure sufficient ink lay down in order for the converted chemical indicator to perform as intended.

#### Performance Conditions

##### Steam sterilization

- a. Ten (10) min +/- 5 s, 121°C/250°F +3/0°C, saturated steam, **OR**
- b. Two (2) min +/- 5 s, 134°C/273°F +3/0°C, saturated steam

##### Dry Heat sterilization

- a. Forty (40) min +/- 1 min, 160°C/320°F +5/0°C, Dry heat

#### Recommended Usage Period

Six (6) months from date of shipment when stored as recommended.

#### Storage & Handling

- Store Ink in the original closed container in a cool and dry place between 40°F/4°C and 80°F/27°C; do not freeze.
- Refer to Safety Data Sheet for information on handling and safety instructions.

#### Warranty

LA-CO Industries (LA-CO) agrees to exchange or refund the price of Tempil inks which, at LA-CO's discretion, contain material and/or manufacture defects, when stored in the original container in the recommended storage conditions. There is no guarantee or warranty as to anything made or sold by LA-CO, or of any services performed except as to title and freedom from encumbrances and except as herein expressly stated and particularly, and without limit the foregoing, there is no guarantee or warranty, express or implied, or merchantability or of fitness for any particular purpose or against claim of infringement or the like. LA-CO makes no warranty (and assumes no liability) as to function of product or systems built to Buyer's design or of the ability of any goods to interface, operate or function with any portions of Buyer's system not provided by LA-CO.

#### Disclaimer

This document is a guideline. The selection and testing of the ink for specific applications is exclusively the user's responsibility. Each press and process must be individually assessed by the user. The colors indicated in this document should be used as a guideline and are not intended to represent an exact color depiction of your converted chemical indicators as Tempilinks cannot be matched to commercial ink color matching systems.