BONDERITE L-FM PL-A ACHESON POST LUBRICANT

(Known As DTI PL-A POST LUBE)

Issued 9/11/2015

1. Introduction:

BONDERITE L-FM PL-A ACHESON (Known As DTI PL-A POST LUBE) is a semi-synthetic ester based product which has been formulated for use as an electrostatically applied post-lubricant. BONDERITE L-FM PL-A ACHESON allows for easy can stripping and is compatible with the Henkel family of can cleaning products. The BONDERITE L-FM PL-A ACHESON is a key part of the Henkel integrated lubricant program and is developed around the successful DTI series of Cupping Lubricants. Unlike conventional post-lubes, BONDERITE L-FM PL-A ACHESON enhances cupper lubricant performance for greater latitude in cup/can forming, extended tool life and reduced bleed through on finished cans.

2. Operating Summary:

BONDERITE L-FM PL-A ACHESON is used as a concentrate in the electrostatic oilers used to precoat drawn and ironed can stock.

Operation and Control Parameters	
Resistance (MEGOHM @75°F)	3.5 - 9.0
Temperature	90 - 110°F (32 – 43°C)
Voltage	65 - 85 kV
Target Film Weight:	25 mg/ft^2/Side

3. The Process:

The process normally consists of the following steps:

A. BONDERITE L-FM PL-A ACHESON is pumped from a tote to the day tank where it is heated slightly above ambient temperature.
B. The spray bar voltage on the electrostatic oiler is set to 65-85 KV.
C. The coil stock is started through the spray bar at slow speed on the slitter line.
D. The speed is increased to normal line speed (normally 3000-8000 fpm. Higher speeds usually require multiple spray bars.
E. Samples of the sheet are tested to determine the film weight.
F. The sheet is coated, slit and coiled simultaneously.
G. The coiled stock is wrapped in plastic and mounted on a skid and transported to the can line.
H. The coil stock is mounted on the uncoiler at the cupper and cupping lubricant is applied and cups are made from the stock.
I. Cans are ironed from the cups.

BONDERITE L-FM PL-A ACHESON POST LUBRICANT

(Known As DTI PL-A POST LUBE)

4. Materials:

- BONDERITE L-FM PL-A ACHESON
- Heptanes or other solvent required for removing the BONDERITE L-FM PL-A ACHESON from the sheet
- Balance for weighing stock before and after cleaning.
- Meter for reading dielectric constant of the BONDERITE L-FM PL-A ACHESON

5. Equipment:

The day tank is constructed of polypropylene or other corrosion resistant material (i.e. 304 stainless).

An electric heater which will maintain the temperature of the post lubricant in the day tank at 90 -110°F (32 – 43°C).

All process piping should be made from 304 stainless steel, polyethylene isophthalic ester, vinyl ester, PVDF or PTFE pipe which will withstand 150°F (66°C).

Electric pumps which will transport the post lubricant from the day tank to the spray bar.

A cartridge filter with 100 micron spiral wound polypropylene or solid phenolic filter media which will be installed on the outlet side of the pump supplying post lube to the spray bar.

The LA spray bar is the preferred equipment for coating rigid container stock.

The spray bar should be heated to 100 -110°F (38 – 43°C).

The oiler should be equipped with a mechanical ventilation system to minimize worker exposure to mists generated during application.

Special care should be taken to avoid using dissimilar metals which could accelerate corrosion.

All process pump seals, valve seats and other elastomers which may come into contact with the concentrated BONDERITE L-FM PL-A ACHESON should be manufactured from PTFE, FKM or 26% Nitrile Buna-N.

Since the BONDERITE L-FM PL-A ACHESON contains mineral oil and powerful emulsifiers the post lubricant applicator should be painted with two part epoxy paint recommended by a reputable paint supplier or use 304 stainless steel with no paint.

6. Pretreatment - Cold Rolled Metal:

BONDERITE L-FM PL-A ACHESON is suitable for use on metal which was rolled on either oil based (Normal Paraffin) or water based lubricant systems. Care should be taken in the rolling process to minimize residual lubricant and rolling debris on the sheet. Coils should be allowed to cool to below 118°F (48°C) prior to application.

BONDERITE L-FM PL-A ACHESON POST LUBRICANT

(Known As DTI PL-A POST LUBE)

7. Post lubing coil stock with BONDERITE L-FM PL-A ACHESON:

System Clean out:

In a start up condition where the post lubricant system is being freshly charged it is important to first perform a system clean out. This can be accomplished by removing all the previous post lube. The purpose of the system clean out is to remove any metal debris and sludge from the day tank and system hardware which will in turn allow for smoother system start up.

After the day tank and application system is thoroughly cleaned out, it should be charged with BONDERITE L-FM PL-A ACHESON in concentrated form. Ensure that the supply lines are flushed of the previous post lubricant.

The system clean out and preparation information contained herein are normal for most installations; however, our representative may suggest a deviation if indicated by local conditions.

The Material Safety Data Sheet (MSDS) for this product should be consulted for first aid and handling information before attempting to use the product.

Concentrate Maintenance:

The BONDERITE L-FM PL-A ACHESON concentrate should be used as supplied. No maintenance is required.

Operation:

Temperature:	90 to 110°F (32 to 43°C)
Flow Rate to spray bar:	1-5 mL per inch
Filtration:	100 micron Filter cartridges (polypropylene is preferred)

8. Testing and Control:

The following tests should be performed at least once every 4 hours. Your Henkel representative will furnish the appropriate procedure for your location.

Film weight per WI MH - Research & Development 942 A.6.1-15.

Target Film weight: 25 mg/ft^2/side

Visual inspection of coil for striping should be performed periodically to ensure even application.

Temperature of the Post- Lubricant:

The temperature of the Post Lubricant is recorded directly from an in-line thermometer which has been calibrated within the last year.

Temperature range: 90 to 110°F (32 to 43°C)

Flow-Rate:

Flow rate measurements are accomplished by flow meters which have been calibrated within the last year.

BONDERITE L-FM PL-A ACHESON POST LUBRICANT

(Known As DTI PL-A POST LUBE)

Flow rate range: 1-5 mL per inch

9. After Treatment:

Cup Forming:

After the post lubricant application, the metal is suitable for the cup forming process. A wide variety of cupping lubricants are compatible with the BONDERITE L-FM PL-A ACHESON, but ideally the DTI series of cupping lubricants should be used.

10. Storage Requirements:

BONDERITE L-FM PL-A ACHESON is stable over a wide range of temperature, but it is recommended that the product be stored between 40 and 100°F (4 and 38°C). BONDERITE L-FM PL-A ACHESON may degrade if the product temperature exceeds 120°F (49°C) for more than 24 hours. Appropriate measures should be taken protect the product from freezing. Care should be taken to keep the product away from water, as water contamination will be greatly reduce the product's resistivity and may cause product separation.

11. Waste Disposal Information:

Applicable regulations covering disposal and discharge of chemical should be consulted and followed.

Disposal information for the chemicals, in the form as supplied, is given on the Material Safety Data Sheet.

12. Precautionary Information:

When handling the chemical products used in this process, the first aid and handling recommendations on the Material Safety Data Sheet should be read, understood, and followed.

The BONDERITE L-FM PL-A ACHESON concentrate may cause irritation of the skin and eyes.

The BONDERITE L-FM PL-A ACHESON is a mildly alkaline material. Do not get in eyes, on skin, or on clothing. In case of contact, follow the recommendations on the Material Safety Data Sheet.

BONDERITE L-FM PL-A ACHESON POST LUBRICANT

(Known As DTI PL-A POST LUBE)

Testing Reagents and Apparatus
(Order only those items which are not already on hand.)

Code	Quantity	Item
++++++	1	Balance capable of weighing to nearest mg
++++++		Heptanes or other suitable solvent
++++++	1	300 ml beaker for testing dielectric constant
++++++		Dielectric probe and resistance meter (order from Peabody)
++++++		Shears for cutting strips from coil

-* * * * *-

Henkel Corporation | 32100 Stephenson Highway | Madison Heights, MI 48071
PHONE: (248) 583-9300 | FAX: (248) 583-2976 | www.henkelna.com/