



# LeKem, Inc.

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*Where Innovation and Quality Meet*

## LEKEM EN STRIP Electroless Nickel Stripper

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### DESCRIPTION

**LEKEM EN STRIP** is a high-speed, immersion stripper for electroless nickel deposits. The easy-to-operate, two-component system is designed to rapidly strip all types of electroless nickel deposits from ferrous-based alloys without attacking the substrate, even when stripping takes place overnight.

In addition to its rapid stripping rate, the **LEKEM EN STRIP** system provides other benefits to the user. The solution is stable, even at high temperatures, which extends the life of the bath.

### ADVANTAGES

- High stripping rate
- Stable solution at high temperatures
- Mild steel equipment can be used
- No attack on ferrous substrates

### STRIPPING CYCLE

1. Clean parts cathodically in alkaline cleaner recommended by your LeKem of Indiana, Inc., representative.

2. Activate parts in a 50% hydrochloric acid pickle.
3. Rinse parts thoroughly in water.
4. Totally immerse parts in the **LEKEM** bath, with agitation. Parts can be stripped most efficiently in a barrel, provided the barrel can withstand the high operating temperature.
5. When stripping is completed, remove parts and rinse thoroughly in water.
6. If black smut or film remains on parts, remove with 50% HCl pickle.
7. Rinse parts thoroughly in water.

### OPERATING DATA

#### **Equipment**

Use mild stainless steel tanks and heating coils.

### OPERATING CONDITIONS

STRIP A*	- 8 oz/gal (60 g/L)
STRIP B	- 50% by volume
Solution Temperature	- 125 - 210F (52-99C) 200F (93C) preferred
Stripping Rate	- 0.0005 - 0.0015 in/hr (13-38 $\mu$ m/hr) for new bath. (Depends on temp., agitation and age of bath.)
Agitation	- Required for best efficiency

## **COPPER BASE METAL**

Electroless nickel may be stripped from copper base metal by the addition of sodium thiosulfate. Use recommended make-up for ferrous metals then add sodium thiosulfate at the rate of 4% of the amount of Strip A used. Example: 60g Strip A requires 2.4g sodium thiosulfate.

## **SOLUTION MAKE-UP & MAINTENANCE**

### **SOLUTION MAKE-UP**

**WARNING: Never add acid solutions to the LEKEM EN STRIP working solution, and never add LEKEM EN STRIP to acid solutions, because of possible liberation of dangerous hydrogen sulfide gas.**

1. Add required amount of LEKEM EN STRIP B.
2. Add required amount of LEKEM STRIP A, and stir until dissolved.
3. Add water to operating level and stir thoroughly.
4. Heat solution to preferred operating temperatures.

### **SOLUTION MAINTENANCE**

During stripping operation, a black film or smut forms on the work, indicating that the **LEKEM EN STRIP** is operating normally. If the black film does not appear on the work, it indicates the following:

1. The nickel is passive or it is not clean and needs activation or recleaning.
2. The bath requires replenishment additions of **LEKEM EN STRIP A** and **LEKEM EN STRIP B**. Usually, additions of 12.5% by volume **STRIP B** and 2 oz/gal (15 g/L) **STRIP A** (same ratio as original make-up) will restore stripping activity.

If stripping activity is not restored by incremental additions, loss in activity may be due to copper poisoning, excessive amounts of sludge, or high nickel content. For copper poisoning, add larger amounts of **STRIP B**. For excessive sludge or nickel content, discarding of spent bath is suggested.

### **WASTE DISPOSAL**

Spent baths should be disposed of in accordance with current regulations and codes.

**CAUTION:** \*Strip A compound dust may be irritating. Exercise caution in its use. **LEKEM EN STRIP** is alkaline and contact with skin and eyes should be avoided. Carefully read precautionary and first-aid information on container label. Wear protective clothing, gloves and goggles. Ventilation of work area is necessary.

#### **TERMS, CONDITIONS AND WARRANTY**

The following terms, conditions and warranty extend to the sale of all LEKEM OF INDIANA, INC., (hereinafter "Seller") products or services requested by customer or any other party. All specifications and representations made on the face of this document are incorporated herein by reference. WARRANTY: Unless otherwise noted, Seller, warrants for a period of one year from the date of manufacture that all products delivered to the customer shall be free from defects. All warranty claims with respect to any alleged defect must be received by the seller within the one year after manufacture date of the goods. Upon timely receipt of verifier claims, Seller, at Seller' option, will replace or refund the purchase of the alleged defective materials. Seller disclaims all other warranties in connection with the goods or services, expressed or implied, as to any matter whatsoever, including without limitation, disclaimer of: Condition, Merchantability, and Fitness for any particular purpose. Seller also disclaims all other warranties in connection with goods provided to buyer, which are not properly maintained, used or inspected.

LIMITATION OF DAMAGE: The liability, if any, of seller and its agents, servants, representatives or employees with regard to goods and/or services for any claims, costs, damages, losses, liabilities and expenses for which they are or were legally liable, whether arising in negligence or in tort, contract or otherwise, shall not exceed in the aggregate the agreed upon price for the goods or services. In no event shall the Seller or its

agents, servants, representatives or employees be liable for indirect, special or consequential damages (subject to state by state application of Mag-Moss, 16CFR 701.3). APPLICABLE LAW AND DISPUTE: Any dispute arising under the sale of goods shall be governed by the laws of the State of Illinois and applicable federal laws. Any dispute, which arises which is not resolved by parties shall be referred to and exclusively pursuant to commercial arbitration rules of the American Arbitration Association of Illinois and its decision shall be enforceable upon entry with a court of competent jurisdiction. The Arbitrator shall not have the power or authority to change or modify or otherwise alter the terms of the Buyers order or written agreement between the parties and the arbitrators decision shall be based on information outlined in the warranty sections and other materials from Seller according to applicable state and federal law. Each party shall bear its' own costs in such arbitration proceeding. Pending the resolution of the problem, the Buyer may proceed under the terms and conditions of the order and all documents incorporated therein. BUYER acknowledges that it has: (1) full knowledge of the hazards associated with the storage, distribution and the use of the Sellers' products; (2) Buyer assumes all responsibility for warning its personnel and any third parties of such hazards. It is the responsibility of the Buyer to comply with all statutes and regulations concerning the storage, handling, transportation and the use of Sellers' products shipper to Buyer by Seller.