

Technical Brief: Lubrication of Solid Zinc Strip

Purpose of Lubrication

When processing zinc strip, lubrication has multiple functions. The water-soluble lubricants listed below act as heat extractors, thus serving a dual function of cooling as well as promoting a low-friction barrier between the tooling and the strip.

Tool life can also be extended by adjusting the volumetric flow rate so that foreign debris is swept away, reducing galling of the tools. In addition, proper chemistry and application techniques can also lead to an improved surface finish, as well as distributing a corrosion-protective barrier on the strip.

Recommended Lubricants For Zinc Strip

The following list will acquaint you with a variety of proven lubricants that may be used for forming zinc strip. Other lubricants that may be equally as functional are also available. This list is for drawing, stamping and roll forming through multi-stage progressive tooling operations.

- Houghto-Draw 7002 @4-6% (Light duty applications)
- Houghton CINDOL 2820 @2-3% (Heavy-duty stamping applications)

Houghton International, Inc.
Madison & Van Buren Avenues
P.O. Box 930
Valley Forge, PA 19482
Phone: (610) 666-4000

- Quakerol 990 BG @3-5% (General purpose applications)

Quaker Chemical Corporation
Elm Street
Conshohocken, PA 19428-0809
Phone: (703) 398-2038
Toll-free: (800) 458-2436

- Nalco XL174L @3-5% (General purpose applications)

Nalco Chemical Company
One Nalco Center
Naperville, IL 60563-1198
Phone: (708) 305-1000

Residual Lubricants

Manufactured strip is packaged and shipped with a thin coating containing 80-150 mg/ft² of processing lubricant. If less lubricant is needed, two alternatives may be considered. A squeegeed or washed strip is available for a nominal processing charge. These services may require additional lead-time depending on order quantities.

Post Cleaning

Post cleaning of the strip is generally not necessary for most applications. Residual amounts of lubrication consisting of 80% mineral oil and 20% mixed esters (proprietary) serve as a protective coating against corrosion. If this barrier is removed (mild alkaline cleaner), the shelf life of a non-coated surface will be significantly reduced dependent on the storage environment.

Oil Compatibility

Several available lubricants not mentioned on our list are equally functional. Your current lubricant may be one of those. If you are unsure of its compatibility with zinc strip, or need a thorough evaluation completed, we will be able to assist you.

If a specific oil or coolant existing in your process needs to be investigated, the chemical analysis lab of our Technical Department may be of service to you. We require complete MSDS/composition data information on the lubricant prior to any analysis. Upon approval by the Environmental Manager, a one-quart sample may be needed for further evaluation. Please do not send oil samples without the Environmental Manager's prior approval.

For assistance, please call us at 1-800-251-7506.