Houghton is your one-stop shop for aluminum and copper flat sheet rolling lubricants, aluminum and copper rod rolling lubricants and the multiple fluids and lubricants that supplement these processes, including mold-release lubes, compatible hydraulic fluids, cleaners and post-lubricants.

With many years of industry experience, Houghton’s Non-Ferrous Team understands the entire process. Our team consists of Formulation Chemists, Technical Specialists and Process Consultants devoted to the needs of the Non-Ferrous Rolling and Drawing Industry.

To help you stay ahead, Houghton is advancing Non-Ferrous processing technology with:

- High Quality Surface Results
- Extended Product and Tool Life
- Increased Productivity
- Decreased Product Waste
- Significant Cost Savings

Houghton is where the world turns for specialized fluids and technical support for all Non-Ferrous rolling and drawing processes. We work with you every step of the way to choose the best fluids, solve problems, save you money, improve your processes, and enhance end-product quality.
Houghton is willing to invest resources, time and effort to solve unique process challenges and develop solutions designed to increase productivity, reduce costs, promote sustainability and minimize risks.
Non-Ferrous Sheet Hot Rolling

**ALUMINUM HOT SHEET ROLLING**

Aluminum hot rolling of flat sheet is a highly sensitive metalworking process, requiring experienced technical support and carefully designed lubricants. The Non-Ferrous rolling industry relies on Houghton for expert process consultation, efficient product implementation, ongoing techno-chemical support and quality products for all types of hot mill configurations.

**Tandemol® Series**

The most prevalent hot rolling lubricant in use around the world, making Tandemol® products widely known for their superior product and performance characteristics. Tandemol products are formulated on a case-by-case basis, to meet the needs for all configurations of mills, all aluminum alloys and all metal gauges including: thick plate, all varieties of clad, and thin-gauge coil.

**Tandemol NOA™ Technology**

Our newest and most cutting-edge fluid uses the NOA™ (Non Oleic Acid) technology, an innovative chemistry that marks an industry breakthrough. For the first time, we are offering a revolutionary aluminum hot rolling lubricant that is both oleic acid free AND maintains/surpasses the performance characteristics of the best conventional rolling lubricant technologies available today. NOA™ is a stable emulsion, with high activity and no acid, no metallic soap formation, reduced lubricant consumption, and potentially no/low additive usage.

**COPPER & ALUMINUM SHEET ROLLING**

**Tandemol® ACR**

A general purpose soluble oil recommended for a wide range of non-ferrous rolling such as aluminum and copper sheet rolling and aluminum continuous cast rod rolling that provide excellent lubrication properties, rust protection and brighter metal surfaces.

Non-Ferrous Sheet Cold Rolling

**ALUMINUM COLD SHEET ROLLING**

Cindol™ CR Series

Cindol CR fluids for cold rolling can be a fully formulated neat rolling oil composed of de-aromatized hydrocarbon fluid and select additives that provide excellent lubrication properties and superior performance for aluminum cold rolling. Alternatively, Houghton can provide Cindol CR cold rolling additives, comprised of materials chosen and blended specifically for your cold rolling process, to be added on-site to the base oil of your choice.

**COPPER COLD SHEET ROLLING**

**Rollub™ Series**

High-performance soluble rolling oils designed to be used on reversing mills for copper-alloys. Formulated with synthetic lubricant and esters that provide rust protection and excellent lubricating properties.

**Fenella® CCR Series**

These lubricants are designed for cold rolling mills producing non-ferrous materials such as copper alloys. They are fully formulated lubricants blended from highly refined base oil and selected additives providing excellent properties such as high oxidative stability, anti-wear properties, high film strength formation and anti-rust properties.

**COMPATIBLE COLD MILL HYDRAULIC FLUID**

**Hydro Drive NS – Non-Staining Aluminum Hydraulic Fluid**

Proprietary fluid having extremely low tendency to stain; used in aluminum cold rolling applications it delivers excellent results versus conventional fluids. Unlike conventional hydraulic fluids, the NS fluids dramatically reduce or eliminate the type of staining usually caused by contamination, and are recommended for hydraulic systems of aluminum sheet rolling mills. Kosher certified.
Non-Ferrous Rod Rolling

**ALUMINUM ROD ROLLING**

**Cindol™ 2820 Series**

A water soluble lubricant designed especially for continuous casting of aluminum in Properzi Mills. Provides excellent lubricity, brighter metal surfaces, non-staining and suitable for numerous aluminum alloys.

**COPPER ROD ROLLING**

**Rodshield™ Series**

A fully synthetic hot rolling lubricant for copper rod that offers lower operating costs and improved productivity for Southwire, Contirod, Properzi and Hazelett-Krupp continuous casting and in-line rod rolling systems.

Non-Ferrous Tube Rolling

**COPPER TUBE ROLLING**

**Cindol™ 2822**

This water soluble lubricant is tolerant of hard water, provides excellent lubricity, brighter metal surface and is non-staining. It is suitable for tube rolling in Pilger Mills and Planetary Mills.

Non-Ferrous Wire Drawing

**ALUMINUM WIRE DRAWING – NEAT OILS**

**Cindol™ 4600 Series**

The Cindol™ 4600 Series of products were especially developed for lubrication in drawing and forming of all aluminum alloys including magnesium alloys. Unique technology lowers the coefficient of friction of steel to aluminum and aluminum to aluminum contact improving process performance.

The Cindol™ 4600 Series has a complete line of premium products suitable for drawing fine aluminum wire, intermediate wire and rod breakdown. When Cindol™ 4600 products are used for wire drawing, they have the following advantages over conventional lubricants: faster drawing speeds, brighter wire, cooler running dies, reduced build-up on dies and long lubricant life.

**ALUMINUM WIRE DRAWING – SOLUBLE OILS**

**Cindol™ 2822**

A water soluble lubricant that is effective for intermediate and fine aluminum wire drawing, as well as enameled processes providing excellent lubrication properties and leaves a minimal residue.
Non-Ferrous Wire Drawing
(continued)

COPPER WIRE DRAWING – SOLUBLE OILS

Houghto Draw® WD 4000 Series

Whether drawing intermediate, multi-wire or fine wire, Houghto Draw® WD 4000 Series has a drawing compound with proven performance. Our versatile line of water-dispersible compounds provide excellent lubricating properties for clean, bright wire.

Houghto Draw® WD 4000 Series offer the following benefits:
- excellent lubricity, good detergency,
- reducing capstan and die wear, buildup of fines, and improving drawing performance while extending solution life. Depending on the origin of the wire, machine design and machine speeds the right product and concentration is selected.

Non-Ferrous Tube Drawing

COPPER TUBE DRAWING – NEAT OILS

Houghto Draw® TD/INT Series

The Houghto Draw® TD/INT Series is a special line of neat oils specially designed for internal and external copper tube drawing, providing high lubricity, reducing capstan and die wear, and improving drawing performance.

The Houghto Draw® TD/INT products are formulated with selected raw materials and special additives specially designed to meet the different needs for each operation.

Metal Forming Products

NON-FERROUS STAMPING AND DRAWING

Cindol™ 4700 Series

Cindol™ 4700 Series is a special line of vanishing oils recommended for non-ferrous metal stamping, cutting and forming. Cindol™ 4700 Series permits faster evaporation of solvent and leaves a minimal residue. It is specifically designed to reduce metal pick-up and galling; no cleaning is necessary after parts are stamped.

The products of Cindol™ 4700 Series are suitable for aluminum profile cutting, light duty and less severe operations of stamping and forming of aluminum fins for radiator and air conditioner and for aluminum tube and automotive gasket conformation.

Metal Removal Products

NON-FERROUS NEAT CUTTING OILS

Cindol™ 4500 Series

Our Cindol™ 4500 Series is a group of environmentally friendly cutting lubricants based on vegetable oil and designed for non-ferrous metal cutting. These products are specially designed to provide excellent lubricity and cooling capacity, increased tool life and good surface finish.

Cindol™ 4500 Series lubricants are especially recommended for cutting aluminum billet and sheet edges in Caster Mills.

Within the Houghton portfolio there is a comprehensive range of ancillary products to complement our Non-Ferrous lubricants. These include Biocides, Rust Preventives, Cleaners, Hydraulic Fluids, etc. Consult your local Technical Sales Representative for additional information. Call: 55 (11) 4512-8200 or Request information online at: houghtonintl.com/en-us/requestinfo
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