



HOUGHTON™

Metalworking Product Line

Quick Reference Guide



Metal Forming

Straight Oils	Cindol™, Drawsol™, Fenella™ and Houghto-Draw® Series products are straight oil based products incorporating various additive packages for a wide variety of metalforming operations. In addition, Ensis™ PL 1608 provides a multifunctional corrosion preventive and prelude drawing fluid suitable for electrostatic and roller applications.
Soluble Oils	Houghton's Drawsol™, Fenella™ and Houghto-Draw® Series are water-based soluble oil type metalforming products providing good lubricity and cleanability as an alternative to straight oil based product technology.
Synthetics	Houghton also offers a complete line of synthetic metalforming products for light-to heavy-duty stamping, drawing, punching and blanking operations. Houghto-Draw®, Drawsol™ and Fenella™ Series products offer excellent lubricity and cleanliness.
Vanishing Compounds	Cindol™, Dasco™, Fenella™ and Vanishing Lubricant/Compound Series products are typical vanishing compounds incorporating various additive technologies covering a wide range of flash points for vanishing lubricant applications.
Hydroforming	Houghton's Hydrodraw™ Series products provide excellent lubricity for both internal and external hydroforming applications.

Heat Treatment

Cold Quenching Oils	Houghton's complete line of cold quenching oils, including the Houghto-Quench®, Dasco-Quench™ and Voluta™ Series, are high-performance products with various heat extraction capabilities (normal, medium and accelerated) designed to suit your specific heat treatment requirements.
Hot Quenching Oils	Mar-Temp® and Dasco-Quench™ Series products are high-performance warm and hot quenching oils available with normal and accelerated quenching speeds designed to minimize distortion. These products provide maximum economy and long product life.
Aqueous Quenchants	Houghton's Aqua-Quench® Series products utilize a variety of cutting-edge polymer chemistries in providing the most comprehensive range of cooling characteristics to suit specific metallurgical requirements. The products are designed for induction and immersion quenching applications and also reduce operational fire hazards associated with oil quenching.



Visit www.houghtonintl.com to locate your local representative, find the most up-to-date information on Houghton's entire product line, and request more product literature.

Metal Cleaning

Spray Cleaners

Spray cleaners are formulated to be used in single- or multi-stage spray washers. Many of our spray cleaners also offer a significant degree of corrosion inhibition.

Cerfa-Kleen®/ Dasco-Kleen™ Series

These products feature biostability, multi-metal compatibility and in-plant rust protection.

Quench-Kleen™ Series

Our cleaning compounds are designed to economically remove quench oils between quenching and tempering operations. They feature excellent oil-splitting capability to separate oil from solution, allowing for long bath operational life.

Soak Cleaners

Soak cleaners are typically fortified with added chemical strength to effectively remove heavier-duty shop soils with only moderate agitation.

Cerfa-Kleen® Series

The Cerfa-Kleen® series of soak cleaners is compatible with a wide range of alloys and offers varying degrees of in-house corrosion inhibition.

Mass Finishing

These cleaners work in conjunction with various media to both deburr and burnish finished components. The products are formulated to keep media from loading. This yields cleaner parts and reduces cleaning cycle times. Media life is also extended.

Vibra-Kleen™ Series

Vibra-Kleen™ 534 is recommended for ferrous applications and offers superior corrosion inhibition. Vibra-Kleen™ 600 is designed to brighten aluminum and is biostable for recycling consideration.

Maintenance Cleaners

Maintenance cleaners include floor cleaners, machine tool sump cleaners and general-purpose shop cleaners.

Hocut® SYM C

Our premier machine tool sump cleaner combines detergency and solvency to provide optimal disruption of caked-on grease, grime and oil. May be used in conjunction with the coolant 24 hours prior to a scheduled dump to loosen old deposits and expedite the cleaning process.

Callina™ Series

Our concentrated floor cleaner is designed for low-concentration use to insure an economically clean facility.

Metal Forging

Oil Graphitic

Houghton's Hot Forging Agent, Hot Nose Compound and Thermex™ Series products are oil graphitic based lubricants designed for use on difficult ferrous and non-ferrous forgings.

Water Graphitic

The Hot Metal Lubricant (HML) and Thermex™ Series are water graphitic based forging compounds designed for carbon, alloy and stainless steel forging applications.

Water Synthetic

To accommodate the needs of certain customers, the Hot Metal Lubricant (HML) and Thermex™ Series products are also available as water-based synthetic (graphite-free) forging lubricants.

Metal Removal

Soluble Oils

Soluble oils traditionally contain the highest levels of hydrophobic materials to deliver optimal boundary lubrication and part finish. They are typically promoted for operations where the highest friction forces are encountered, as in broaching and threading operations.

Hocut® Series

This is our premier “walk-away” product line. These boric acid free general-purpose cutting fluids are for ferrous and non-ferrous metals. These next-generation fluids produce excellent coolant longevity even in severe sump conditions. With these very low-maintenance products, concentration control is virtually all that is needed.

Dasco Sol™ Series

These economical, general-purpose products are for ferrous and non-ferrous metals. The emulsion leaves a light oily residue to provide good corrosion protection on exposed surfaces. This product can be used for general machining and grinding, and light forming and stamping operations.

Dromus™ Series

Dromus™ is an emulsifiable oil fortified with coupling agents, stabilizing agents and rust preventives. It can be used for all types of general machining of ferrous and non-ferrous metals. A high degree of oiliness provides excellent machine tool and way lubrication.

Semi-Synthetics

Semi-synthetics fall between the higher oil content soluble oils and the zero oil content synthetic materials. They often deliver the best of both worlds by providing adequate cooling and boundary lubrication.

Hocut® Series

These low oil content variations of our premier general-purpose cutting fluids are for both ferrous and non-ferrous materials. They are more suited to lighter-duty machining and grinding operations as compared to our soluble oil Hocut® line. The semi-synthetic Hocut® products are also low-maintenance products; concentration control is virtually all that is needed.

Dascool™ Series

These moderate- to heavy-duty cutting fluids are for cast iron, steel and stainless steel. They provide good corrosion protection for cast iron.

Adrana™ Series

These moderate- to heavy-duty fluids form stable, translucent micro-emulsions when mixed with water, and are clean-running with low-foam characteristics. They are recommended for the grinding and machining of cast iron, steel, stainless steel and non-ferrous metals.

Sitala™ Series

These moderate- to heavy-duty fluids form stable macro-emulsions when mixed with water. They have a high level of lubricity, low-foam characteristics and are recommended for the grinding and machining of steel, stainless steel and non-ferrous metals.

Synthetics

Synthetics contain no oil at all and thereby typically offer optimal cooling and cleanliness. They are often considered as go-to chemistries for grinding and lighter-duty operations. If they are fortified, they are also applicable for heavier-duty jobs.

Houghto-Grind® Series

The series offers cost-effective corrosion protection for light-duty grinding of cast iron and steels, and products are free of nitrite, nitrate, phenol, chlorinated paraffin and DEA.

Hocut® Series

These are general-purpose synthetics for ferrous machining with excellent chip settling properties. Their long sump life is perfect for in-house recycling programs, and they provide excellent tramp oil rejection.

Metalina™ Series

These heavy-duty synthetic products have excellent tramp oil rejection, a high level of lubricity and low-foam characteristics. They are recommended for the grinding and machining of low- and high-alloyed steels and stainless steel. B 800 is also recommended for machining of aerospace aluminum.

Neat Oils

Our Cut-Max®, Excelene™, Dascolene™, Garia™ and Macron™ cutting oils are formulated with premium-grade, highly refined base oil stocks. They are available in a wide variety of viscosities. Many are EP-fortified to provide optimal performance on the toughest applications and the most difficult alloys.

Metal Protecting

Rust and corrosion are the naturally occurring enemies of machined parts. Moisture, oxygen, dirt, competitive metalworking films and other materials can cause serious damage and your parts to be rejected. Houghton's complete line of solvent-, oil- and water-based corrosion preventives protect metal parts during production and in storage, both indoors and outdoors. They also protect your tools and equipment. Our Rust Veto® and Cosmoline® product lines perform in spray, dip, flood and brush application methodologies and can be used for in-process protection or final rust protection prior to shipment or storage. We offer nitrite-free, barium-free and VOC-friendly options.

In-Process, Indoor & Outdoor

Rust Veto® Series

Our Rust Veto® series of products was designed for a wide variety of industrial applications. We offer biostable synthetic inhibitors like Rust Veto® 2212 that are used for leak and pressure testing, in the second or third stage of a spray washer, and for in-process corrosion inhibition. If you need up to one year of indoor storage protection, our Rust Veto® 4214 series of products is the place to start. If you are storing parts outdoors, products like Rust Veto® 377-HF, Rust Veto® 342 and Rust Veto® 344 are suitable for use.

Cosmoline® Series

If you manufacture munitions or bearings or are involved with a military contract, then you will likely have a demand for our Cosmoline® line of corrosion inhibitors. We offer MIL-SPEC fingerprint removers, lubricating oils and long-term storage options.

Surface Finishing

Houghto-Prep™ ZP Technology

Houghto-Prep™ ZP Technology products are completely biodegradable cleaners and self-limiting coatings for ferrous, aluminum and other non-ferrous components in preparation for paint and other organic coatings. Houghto-Prep™ ZP Technology offers an alternative to traditional iron, zinc and chrome phosphate coatings by using a unique zirconium coating that is excellent for promoting adhesion and salt spray resistance. Houghto-Prep™ ZP Technology operates at low temperatures, is environmentally friendly, provides unequalled bath life, and provides very easy operation.

Fluid Power

Anhydrous

Houghton's line of anhydrous fire-resistant hydraulic fluids is based on high-quality esters and formulated with additives to achieve excellent fluid performance and long service life.

Cosmolubric® Series

Cosmolubric® Series products are composed of high-quality esters. These esters, along with carefully selected additives, provide fluids that are chemically and thermally stable. Cosmolubric® fluids are formulated for long life and dependable performance where a fire-resistant fluid is required.

Houghto-Safe® Series

Houghto-Safe® 1000 Series products are phosphate ester fluids that combine fire resistance with excellent lubricating properties.

Water-Based

Houghton International's water-based hydraulic fluids provide optimum fire resistance and performance. Houghto-Safe® water glycols are recognized worldwide. Our line of water-based fluids is used in a wide variety of hydraulic applications including military, steel production, die casting and food processing, just to name a few.

Houghto-Safe® Series

Houghto-Safe® water glycol type fire-resistant hydraulic fluids are designed to meet the requirements of modern industrial hydraulic systems. Houghto-Safe® water glycols have a documented history of successfully operating in the most demanding hydraulic operations.

Hydrolubric® Series

Hydrolubric® 120 Series products are synthetic water additives specifically designed to meet the needs of central water hydraulic systems. These products provide lubrication and corrosion protection along with additives to protect systems from biological activity.



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