

AMALIE

Better than it has to be®
Since 1903



PREMIUM HEAT TRANSFER AND QUENCHING OILS

AMALIE Premium Heat Transfer and Quenching Oils are mineral oil based fluids for use in secondary or indirect heating systems. They are formulated with high quality group II base stocks. They are non-toxic, non-corrosive, have a low odor level and excellent seal compatibility. These fluids have a high ability to absorb heat quickly and transport it to the material or fluid requiring heat. Their excellent thermal and oxidation stability provides long service life and clean heat exchanger systems. They are recommended for use in closed liquid-phase heat transfer systems, and open systems where maximum bulk oil temperatures do not exceed 190°C.

AMALIE Premium Heat Transfer and Quenching Oils may also be used for rapid or controlled cooling of steel or other metals. This treatment can be part of a hardening, tempering or other heat-treating process. They aid in the hardening of steel by controlling heat transfer during quenching. These oils also enhance wetting of steel during quenching to minimize the formation of undesirable thermal and transformational gradients which may lead to increased distortion and cracking.

Benefits:

- Accelerated cooling rate
- Constant cooling rates in service
- Reduced Steel component cracking and distortion
- Minimum viscosity increase through controlled formation of organic acids
- Promotes deep hardening
- Low toxicity and corrosiveness
- Meets requirements of DIN 51502 Class L and ISO 6743/12 Category L

RUST PREVENTION FLUIDS

AMALIE Rust Prevention Fluids are formulated for use in applications requiring a robust and effective level of protection that may be applied by brush, roller, dip or spray. This fluid contains a solvent and various chemical additives that will prevent corrosion and yellow stain on sheet metal and will prevent the formation of white rust on galvanized steel. Evaporation of the solvent provides a protective oily film on the metal. When the solvent evaporates, a thin, transparent, oily film remains for rust prevention. These fluids are available in two grades, light and medium. The **AMALIE Rust Prevention Fluid - Light** offers faster penetration and has a low flash point. The **AMALIE Rust Prevention Fluid - Medium** will give a more stable protective film, which is suitable for protecting surfaces for longer periods of time. These fluids are formulated with mineral base oils and light volatile solvents.

GENERAL PURPOSE ROLLING OILS

AMALIE General Purpose Rolling Oils are multipurpose rolling oils formulated from premium base stocks and using quality additives which are non-staining. These rolling oils provide wear, rust, and oxidation protection, and contain lubricity agents to improve the metal finish. **AMALIE General Purpose Rolling Oils** are recommended for use in a variety of rolling applications for nonferrous materials, such as aluminum, copper, brass, and other copper alloys. They are nonstaining, do not contain zinc, and provide very good wear protection for use in hydraulic systems. These oils can also be used as an exceptional oxidation resistance, foam control, rust and corrosion protection, and rapid demulsibility. **AMALIE General Purpose Rolling Oils** provide the following specific performance benefits:

Benefits:

- Oxidation resistance and thermal stability
- Non-staining – will not discolor finishes
- Rapid water separation
- Superior rust and corrosion for gears and bearings
- Quick foam release

SOLUBLE OIL

AMALIE Soluble Oil 294 is a water-soluble metal cutting oil containing rust and foam inhibitors and an emulsifier that effectively stabilized the fluid in soft and hard water. **AMALIE Soluble Oil 294** is recommended for use in cutting ferrous and non-ferrous metals, in boring, milling, and turning operations. It is designed for machine ability of both ferrous and non-ferrous metals with ratings of 50 - 100. The formulation contains no nitrite or phenol and is safe to use in high speed cutting operations. **AMALIE Soluble Oil 294** is recommended for machining operations of plane and shaping, drilling and sawing, and grinding using dilutions with water at ratios of 30:1 for aluminum and copper, 10:1 for copper alloys, 15:1 for ferrous metals. This oil is economical, forms a stable emulsion, is foam inhibited, and offers rust protection for machine and work piece. It is a safe to use product with no nitrates and phenols.

Benefits:

- Recommended for both Ferrous and Non-Ferrous metals
- Nitrite and phenol free
- Foam inhibited

CUTTING OIL

AMALIE Cutting Oils are premium cutting oils formulated with high quality mineral oils and additives. These oils are designed to aid the cutting, grinding, or forming of metal and to provide good finish and work piece quality while extending the life of the machine tools. Both products identified below are EP and anti-wear formulated without chlorine containing chemistry. **AMALIE Medium Cutting Oil 304** is high quality general-purpose oil formulated to provide extreme pressure (EP) properties and friction modification for a variety of metals. The inactive sulfurized fatty additive package is not corrosive to aluminum or yellow metals such as copper or bronze, and is thus nonstaining to the metal being worked. **AMALIE Heavy Cutting Oil 310** is designed for heavy duty, extreme pressure conditions where an active sulfur agent is desired. This formula also contains a finishing agent and is primarily formulated for ferrous metals. **AMALIE** has the capability of formulating many types of Metal working Fluids, both straight and soluble. Please discuss your needs with a Company representative.

WAY LUBE - SUPERIOR OILS

AMALIE Way Lube - Superior Oils are premium slide-way lubricants which are formulated to protect slide-ways which carry machine tools in severe environments including plain bearing slideways of lathes, shapers, grinders, and milling machines. Performance attributes afforded by **AMALIE Way Lube - Superior Oils** include: anti-wear/extreme pressure performance, anti-rust performance, yellow metal corrosion resistance, and anti-oxidancy. In addition, the smooth operation of the way is seen when these oils are used, can lead to improved accuracy and quality, which is a result of their strong friction performance as measured by stick-slip resistance. Given the proximity of the way to machine tools and their cutting fluids, a degree of separation from the cutting fluid is desirable. **AMALIE Way Lube - Superior Oils** separate easily from a variety of emulsion-type cutting fluids which allow them to be separated and circulated back to the cutting tool. They also contain tackiness additives to ensure good adherence of the oil to both vertical and horizontal ways, and to prevent any cutting fluid from washing away the slide-way oil. This product is formulated in various ISO viscosity grades, with varying high and low temperature properties depending on ambient conditions. They are suitable for use wherever Cincinnati Machine slide-way oil performance is called for and meet stringent performance requirements.

MADE IN U.S.A.



PREMIUM HEAT TRANSFER AND QUENCHING OILS

VISCOSITY	PACK SIZE	PART #
22	55 Gallon Drum	160-64013-05
32	55 Gallon Drum	160-64023-05

RUST PREVENTION FLUIDS

VISCOSITY	PACK SIZE	PART #
LIQUID	55 Gallon Drum	160-67953-05
MEDIUM	55 Gallon Drum	160-67963-05

GENERAL PURPOSE ROLLING OILS

VISCOSITY	PACK SIZE	PART #
10	55 Gallon Drum	160-67903-05
15	55 Gallon Drum	160-67973-05
68	55 Gallon Drum	160-67943-05

SOLUBLE OIL

VISCOSITY	PACK SIZE	PART #
294	55 Gallon Drum	160-63913-05

WAY LUBE - SUPERIOR OILS

VISCOSITY	PACK SIZE	PART #
32	55 Gallon Drum	160-64923-05
68	55 Gallon Drum	160-64943-05
220	55 Gallon Drum	160-74933-05

CUTTING OILS

VISCOSITY	PACK SIZE	PART #
MEDIUM 304	55 Gallon Drum	160-63813-05
HEAVY 310	55 Gallon Drum	160-73893-05

Always refer to your vehicles operating manual to select the correct grade of oil for your engine. The data presented herein are believed to be accurate; however, Amalie Oil Company shall not be liable for its content and makes no warranty with respect thereto.

