



General Industrial Lubricants



Pneumatic Tool/Rock Drill/Sawmill Lubricant • Multi-use Industrial Oil • WayLube Superior • Spindle/Needle Bearing Lubricant • Heavy Duty Bearing/Circulating Lubricant



Amalie Pneumatic Tool/Rock Drill/Sawmill Lubricants have been designed to bring strong extreme pressure (EP) performance under the most demanding applications. Resistant to water wash-off, this series of lubricants protects surfaces under conditions of pneumatic percussion, which may lead to rifling damage. In addition, the product is designed to lubricate saw blades without leading to build up pitch deposits. **Amalie Pneumatic Tool/Rock Drill/Sawmill Lubricants** are useful in a variety of applications, such as tools that require extreme pressure properties for protection of equipment under high load conditions and tack adhesion to the work surface. These lubricants will protect against rust formation on tool parts. **Amalie Pneumatic Tool/Rock Drill/Sawmill Lubricants** contain additives that minimize spray mist. This is particularly important in sawmill applications. In sawmill applications; **Amalie Pneumatic Tool/Rock Drill/Sawmill Lubricants** will cling tenaciously to the blade lowering lubricant replacement costs. These oils contain an EP agent and various chemical components to control wear, oxidation, sludge, corrosion and foaming. These products are formulated in various ISO viscosity grades, with varying high and low temperature properties depending on ambient conditions.

Amalie Multi-Use Industrial Oil is formulated as a general workshop oil to bring slide-way, hydraulic, and gear performance in a single lubricant. The product thus allows significant inventory and supply chain cost reduction, and minimizes the possibility of lubricant misapplication. **Amalie Multi-Use Industrial Oils** protect ways which often carry machine tools in severe environments. Performance attributes that are needed by a slide-way lubricant can vary significantly from application to application, though the following are very common: Antiwear/extreme pressure performance, anti-rust performance, yellow metal corrosion resistance, and anti-oxidancy. In addition, the smooth operation of the way can lead to improved accuracy and quality, so strong friction performance as measured by stick-slip resistance is essential. Given the proximity of the way to machine tools and their cutting fluids, a degree of separation from the cutting fluid is also needed. Indeed, emulsion-type cutting fluids will not be damaged by mixing with **Amalie Multi-Use Industrial Oil**, as often this fluid is separated and circulated back to the cutting tool. This product is formulated in various ISO viscosity grades, with varying high and low temperature properties depending on ambient conditions.

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 slide-ways of lathes, shapers, grinders, and milling machines. Performance attributes afforded by **Amalie Way Lubes** include: Antiwear/extreme pressure performance, anti-rust performance, yellow metal corrosion resistance, and anti-oxidancy. In addition, the smooth operation of the way is seen when **Amalie Way Lube** is used, can lead to improved accuracy and quality, which is a result of **Amalie Way Lubes** 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 Lubes** separate easily from a variety of emulsion-type cutting fluids which allow them to be separated and circulated back to the cutting tool. **Amalie Way Lubes** also contains 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.

Amalie Spindle/Needle bearing oils are low viscosity oils used to lubricate the bearings of commercial sewing and textile equipment where the yarn or fabric does not contact the lubricant. These oils are also recommended for high-speed spindle bearings in precision grinders and other machine tools requiring low-viscosity oils. The product offers strong oxidation and rust resistance properties. The higher viscosity index (VI) of these oils reduces the tendency for stray mist or fogging in higher speed applications. **Amalie Spindle/Needle** bearing oils are suitable for use wherever strong antiwear protection, oxidation protection, and rust inhibition are required. Not recommended for applications where the spindle oil contacts the yarn or fabric.

Amalie Heavy Duty Bearing/Circulating Lubricants are formulated to protect high-speed, no-twist rod mills such as those manufactured by Morgan Construction Company USA. **Amalie Heavy Duty Bearing/Circulating Lubricants** are formulated to bring outstanding rust and corrosion control in gears, shafts, bearing screws, and internal housing sections. Balanced corrosion protection is very necessary to counteract water from condensation and roll neck seal leakage. These lubricants will also ensure that oil-return lines will be protected from corrosion. In addition, these lubricants resist the formation of oil-water emulsions and have good water separability. **Amalie Heavy Duty Bearing/Circulating Lubricants** are formulated with anti-wear additives to protect gearing against scuffing and scoring. Film strength and other properties bring low friction or low break-away torque which is critical to good ball, roller and oil film bearing operations.

Some performance levels are limited by viscosity grades. Please consult the Amalie Performance Application Chart, the Amalie Inspection Data Table for the appropriate Amalie product or contact your Amalie District Manager for more complete information and recommendations.

TYPICAL INSPECTION DATA –

	ISO grade	API Gravity	Flash Point C.	Viscosity cSt@40C	Viscosity cSt@100C	Viscosity Index	Pour Point, C.
Pneumatic Tool	32	29.0	200	32.0	5.2	100	-12
Rock Drill	46	30.3	200	46.0	7.2	100	-12
Sawmill	68	29.6	210	68.0	8.8	100	-12
Lubricants	100	30.0	210	100	11.2	100	-12
	220	29.5	220	220	22.8	100	-12
Multi-use	32	29.5	190	32.0	5.2	100	-12
Industrial	68	30.0	210	68.0	8.8	100	-12
Oils	220	29.0	220	220	22.6	100	-12
Way	32	29.0	200	32.0	5.2	100	-12
Lube	68	29.6	210	68.0	8.8	100	-12
Superior	150	30.0	210	150	15.2	100	-12
Oils	220	29.5	220	220	22.8	100	-12
Spindle	5	28.7	130	5.0	-	-	-21
Needle	10	32.0	150	10.0	-	-	-15
Bearing	15	33.8	170	15.0	-	-	-15
Oils	22	33.0	200	22.0	4.2	100	-15
	32	30.0	200	32.0	5.4	100	-12
Heavy	100	30.0	220	100	11.2	100	-15
Duty	150	29.5	230	150	15.2	100	-15
Bearing	220	28.0	240	220	19.0	100	-12
Circulating	460	26.3	260	460	30.5	100	-12
Lubricants	680	26.5	270	680	45.0	100	-9

PERFORMANCE APPLICATION CHART

SPECIFICATIONS	Pneumatic Tool Rock Drill Sawmill Oils	Multi-use Industrial Oils	Way Lube Superior Oils	Spindle Needle Bearing Lubricant	Heavy Duty Bearing/ Circulating Oils
AGMA 9005-D94		Gear			
Cincinnati Machine	√	Slideway	P-53, P-47, P-50	√	√
Ingersol Rand	√				
Gardner Denver	√				
Sullivan	√				
DIN 51517		Hydraulic			
GM LS-2		√			
US STEEL 224		Gear			
Vickers 104C,STM D 2882			√		
Rust, ASTM D 665A,B	√	√	√	√	√
Corrosion, ASTM D 130	√	√	√	√	√
Timkin OK load, 60 lb min		√	√		
FZG Load StagePass (12 pass)		√	√		
Demulsibility ASTM D 2711(pass)	√	√	√	√	√
Oxidation, S-200 (pass)	√	√	√	√	√
Foam Inhibition, ASTM D 892 (pass)	√	√	√	√	√
Steam Emulsion Test (pass)	√				

* Form Oils are specific purpose and are not listed under the above specifications. See your Amalie Sales Representative for more specific information