



SAWING AND METALWORKING FLUIDS

High Performance Fluids To
Optimize Your Sawing Operation

Environmentally Friendly

Outstanding Lubricity

Exceptional Cooling

Extended Tool Life

Increased Shop Productivity



LENOX is a leading supplier of industrial products and services to high production facilities in the metalworking industry. We produce a comprehensive range of **BEST-IN-CLASS** cutting products and complement these with high performance metalworking fluids and delivery systems designed to optimize your machining operations. Our advanced lubricants are used in operations that produce high quality components for the automotive, aerospace, energy, transportation, and construction industries.

EFFICIENCY, QUALITY AND CONSISTENCY

LENOX sawing and metalworking fluids are used to machine a variety of metals from aluminum to high-strength steels. Our fluids can dramatically increase the productivity of your shop. They are manufactured with quality and consistency to deliver the following benefits to your cutting operation:

EXCELLENT LUBRICATION

Reduces frictional heat between the tool and work piece

EXCEPTIONAL COOLING

For extended blade life

EASIER TOOTH PENETRATION

Better chip formation, evacuation, and faster cutting rates

LESS MACHINE WEAR

Decreased maintenance costs

MINIMIZED DOWNTIME

Fluids require less maintenance and last longer

IMPROVED PART FINISH

Reduces secondary processing.
Leaves no residue stains, corrosion or rust.

ENVIRONMENTALLY FRIENDLY

LENOX recognizes the importance of environmentally friendly products that enable a safe work environment. Our products do not contain chlorine, sulphur, sulphonates, or any other damaging chemical components. The fluids are designed to be physically and chemically stable for the long term, which leads to decreased fluid consumption and reduces disposal costs. Our *MICRONIZER*[®] delivery systems reduce the amount of fluid used per day, while providing a safe and clean work environment.

LENOX SYNTHETIC FLUIDS

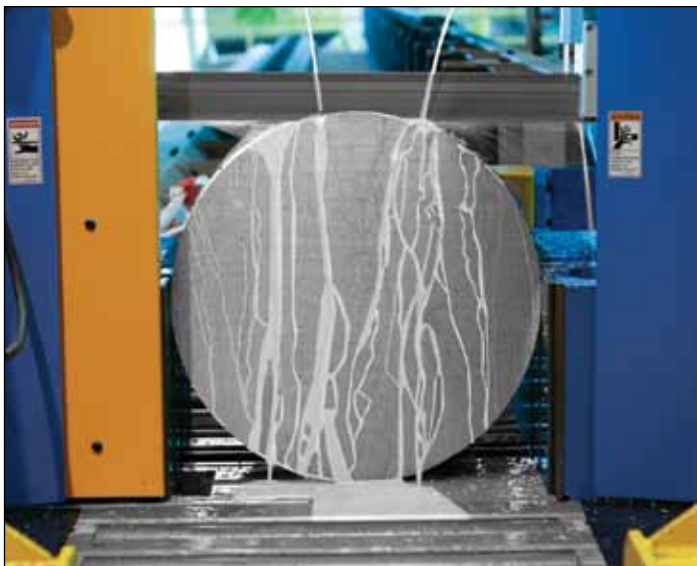
These formulations provide excellent cooling with the ability to wet the work piece without the use of oil. They offer the best heat reduction, superior rust control, and the longest sump life. Like semi-synthetics, these solutions contain performance additives such as lubrication aids, biocides, and rust inhibitors.

LENOX SEMI-SYNTHETIC FLUIDS

An emulsion of synthetic oil (2-30%) and water provides lubrication, reduced heat, rust protection, and a longer sump life than soluble oils. Biocides, corrosion inhibitors, and anti-foaming agents are added to improve performance and extend life.

LENOX SOLUBLE OILS

Soluble oils contain higher oil content (30-85%) and are formulated with emulsifiers to aid mixing with water. The increased oil improves lubrication for moderate to heavy duty machining applications. Soluble oils reduce machine wear and inhibit rust, but often require more maintenance to extend sump life.



LENOX is **COMMITTED** to providing high performance solutions that deliver **SUPERIOR PERFORMANCE.**

CYCLE HD™

Heavy Duty, Water Soluble Oil with No Harmful Additives

EXTENDS BLADE LIFE

Exceptional lubrication protects the blade from premature wear

EXTREMELY VERSATILE

Engineered for a variety of applications. One fluid for the whole shop

A BETTER SOLUTION FOR THE ENVIRONMENT

Enhanced performance without the harmful additives associated with typical EP packages

No chlorine, no phosphates, no nitrites, and no sulphur

DESIGNED FOR LONG TERM STABILITY

Controls bacterial attacks, which extends sump life

Smaller oil droplets prevent separation of the oil from water

INCREASED SHOP PRODUCTIVITY


Reduced machine wear decreases maintenance and downtime

Provides less drag off, which lowers fluid replacement costs

OPERATOR FRIENDLY

Mild to the skin, low foaming, and low misting



PRODUCT NO	CONTAINER SIZE		CONTAINERS PER CASE	NFPA CODE SPECS	
	GALLON	LITER			
97125LNX	1	3.8	4	HMIS/WHMIS	
97128LNX	2-1/2	9.5	2	HEALTH INDEX – 1	
97129LNX	5	18.9	—	FLAMMABILITY – 1	
97130LNX	55	208.2 drum	—	REACTIVITY – 0	
97133LNX	275	1,040.9 tote	—	PERSONAL PROTECTION – A	

Not recommended for use as a spray lubricant. Mix this product with water as recommended. Not for use on magnesium.

BAND-ADE®

High Performance, Semi-Synthetic Sawing Fluid

General purpose flood coolant designed for light to moderate-duty machining applications involving both ferrous and non-ferrous metals

EXTENDS BLADE LIFE

Increased lubrication aids in chip formation and evacuation

EXCEPTIONAL COOLING

Water-soluble formulation helps to reduce frictional heat and improves cutting performance

INCREASES PRODUCTIVITY


Faster cutting and reduced machine wear increases efficiency

ENVIRONMENTALLY FRIENDLY

Products are biodegradable, safe for the operator to use, and do not contain harmful chemicals like chlorine and sulphur

SURFACES CAN BE WELDED AND PAINTED OVER



PRODUCT NO	CONTAINER SIZE		CONTAINERS PER CASE	NFPA CODE SPECS	
	GALLON	LITER			
68004	1	3.8	4	HMIS/WHMIS	
68005	2-1/2	9.5	2	HEALTH INDEX – 0	
68003	5	18.9	—	FLAMMABILITY – 0	
68001	55	208.2 drum	—	REACTIVITY – 0	
68007	275	1,040.9 tote	—	PERSONAL PROTECTION – A	

Not recommended for use as a spray lubricant. Mix this product with water as recommended. Not for use on Magnesium.

SAW MASTER™

High Quality, Synthetic Sawing Fluid

Specially formulated flood coolant for light to moderate-duty applications on ferrous metals and alloys

LONGER BLADE LIFE. FASTER CUTTING.

Lubricates and cools to get the most from your blade or tool

REJECTS MOST TRAMP OILS

Unwanted oils can be separated and removed to keep the fluid performing longer

EXCELLENT SUMP LIFE

Advanced anti-microbial agents control bacterial growth and prevent rancidity, which lowers fluid replacement costs


CAN BE USED IN MOST HARD WATER APPLICATIONS

Eliminates filtration problems and residue

SURFACES CAN BE WELDED AND PAINTED OVER

LOW TO NON-FOAMING



PRODUCT NO	CONTAINER SIZE		CONTAINERS PER CASE	NFPA CODE SPECS
	GALLON	LITER		
68064	1	3.8	4	HMIS/WHMIS HEALTH INDEX – 1 FLAMMABILITY – 0 REACTIVITY – 0 PERSONAL PROTECTION – A <div style="text-align: right;">  <p>HEALTH 1 0 FIRE 0 0 REACTIVITY</p> <p>SPECIAL HAZARD</p> </div>
68061	5	18.9	—	
68062	55	208.2 drum	—	
68063	275	1,040.9 tote	—	

Not recommended for use as a spray lubricant. Mix this product with water as recommended. Not for use on Magnesium.

MAINTENANCE

Taking the time to properly maintain your fluids will keep them working well longer. Over time, the chemical and physical properties can change as water evaporates and contaminants get into the sump. Following these steps will extend the life of the product, which will minimize downtime and decrease the cost of the operation.

1) Monitor the concentration and pH of the fluid

If the concentration becomes too high, it can lead to foaming and residue formation. If the concentration falls too low, it can decrease lubricity and give bacteria the chance to grow. Controlling the concentration and pH level will keep the level of bacteria at a minimum making the solution more effective and the workplace more pleasant.

2) As the concentration of the fluid changes, take steps to restore the original dilution ratio

A pre-mixed blend of fluid and water should be added to the sump, based on readings obtained from your refractometer.

3) Remove tramp oil regularly with a skimmer or filtration system

Tramp oils will separate from the solution and float to the top of the sump. They can be damaging to the solution and decrease the effectiveness if they are not removed.

4) Keep the sump free of contaminants

The presence of chips, swarf, dirt, food, and trash can impact pH and allow bacteria to grow.

5) Aerate the fluid when not in use

Mixing the fluid or installing an air pump will prevent the growth of anaerobic bacteria and will eliminate foul odor.

6) Clean the system

Use LENOX Machine Cleaner between charges.

LENOX MACHINE CLEANER

Prepares Your Sump for the use of LENOX Sawing Fluids



CLEANS THE MACHINE BETWEEN CHARGES

Eliminates bacteria and fungi

EXTENDS THE LIFE OF THE SAWING FLUID

Helps loosen dirt and contaminants for easier removal and a cleaner system

PREVENTS CONTAMINATION WHEN CONVERTING FLUIDS

PRODUCT NO	CONTAINER SIZE		CONTAINERS PER CASE	NFPA CODE SPECS
	GALLON	LITER		
68006	1	3.8	4	HMIS/WHMIS HEALTH INDEX – 1 FLAMMABILITY – 0 REACTIVITY – 0 PERSONAL PROTECTION – A

*For industrial use only.
Mix this product with water as recommended*



REFRACTOMETER

Measures Sawing Fluid Concentration

IMPROVE FLUID EFFECTIVENESS

Maintaining the proper water to fluid ratio increases tool life and ensures longer fluid performance

EASY TO USE AND CALIBRATE

Calibrate with a drop of water, put a small amount of sawing fluid in the refractometer. A quick look through the lens shows the fluid ratio.



PRODUCT NO	DESCRIPTION
68012	Refractometer

DELIVERY SYSTEMS

LENOX has two delivery systems for operations that require Minimum Quantity Lubrication (MQL). These precision applicators effectively reduce fluid consumption, maintenance costs, and clean up. When coupled with LENOX LUBE® and C/Al Lube, you can eliminate hazardous misting and ensure a safe work environment. The MICRONIZER and MICRONIZER, Jr. can deliver a precise amount of lubricant straight to the cutting tool, which improves cutting performance, extends blade life, enhances finish quality and lowers costs.



LENOX® LUBE®

Clean, Synthetic Lubricant for Spray Applications

Advanced formula enables superior cutting performance when Minimum Quantity Lubrication (MQL) is required

EXTENDS TOOL LIFE

Extreme pressure lubricant reduces frictional heat, prevents chip welding, and delivers an excellent work piece finish

CLEAN AND ENVIRONMENTALLY FRIENDLY

Synthetic, water-based formulation is safe for the shop and operator

REDUCES COSTS

No disposal costs and use only ounces per day

OPTIMUM PERFORMANCE ON FERROUS METALS

Use with our MICRONIZER® systems to lubricate carbon/alloy steels and stainless steels. Works best on pipe and thin-walled tubing

SURFACES CAN BE WELDED AND PAINTED OVER



Easily cut structural metals when used with LENOX® Rx® blades.

PRODUCT NO	CONTAINER SIZE		CONTAINERS PER CASE	NFPA CODE SPECS
	GALLON	LITER		
68014	1	3.8	4	HMIS/WHMIS HEALTH INDEX – 0 FLAMMABILITY – 0 REACTIVITY – 0 PERSONAL PROTECTION – A
68018	5	18.9	—	
68017	55	208.2 drum	—	
68016	275	1,040.9 tote	—	



Use this product as it comes from the container—do not mix with water.

C/AI LUBE

High Lubricity, Synthetic Formulation for Spray Applications

Synthetic oil formulated for cutting solids and structurals in a Near Dry Machining (NDM) application

WORKS EFFECTIVELY ON ALL TYPES OF MATERIALS

Use on a variety of steels and non-ferrous metals. Works well on large structural beams, small solids, and all shapes of aluminum (billets, plates and castings)

INCREASED PRODUCTIVITY

Enhances lubrication for higher cutting speeds and feed rates

EXTENDS TOOL LIFE

Enables tooth penetration and chip formation which decreases wear on the machine and blade

CONTROL COSTS

Decreases the volume consumed and lowers replacement costs when used with our MICRONIZER systems



PRODUCT NO	CONTAINER SIZE		CONTAINERS PER CASE	NFPA CODE SPECS
	GALLON	LITER		
68024	1	3.8	4	HMIS/WHMIS HEALTH INDEX – 1 FLAMMABILITY – 1 REACTIVITY – 0 PERSONAL PROTECTION – A
68026	5	18.9	—	
68025	55	208.2 drum	—	
68028	275	1,040.9 tote	—	



Use this product as it comes from the container—do not mix with water.

MSDS available in hard copy or downloadable from lenoxtools.com

LUBE TUBE

Manually Applied Lubricant Stick

EXTREME PRESSURE LUBRICANT

Prevents the build-up of frictional heat

DESIGNED TO BE APPLIED TO BAND SAW BLADES AND OTHER CUTTING TOOLS

Improves overall tool life and productivity when sawing, drilling, milling, grinding, threading and tapping. Works well on abrasives (belts, sanding discs and pads)

CAN BE USED ON FERROUS AND NON-FERROUS METALS, ALUMINUM GATES AND RISERS, PLATES AND EXTRUSIONS

BIODEGRADABLE, NON-TOXIC AND NON-STAINING



PRODUCT NO	CONTAINER SIZE OUNCES	GRAMS	TUBES PER CASE	NFPA CODE SPECS
68020	14.5	411.1	12	HMIS/WHMIS HEALTH INDEX – 0 FLAMMABILITY – 0 REACTIVITY – 0 PERSONAL PROTECTION – A

PROTOOL LUBE®

Extends Tool Life

A UNIQUE SYNTHETIC EMULSION DESIGNED TO INCREASE TOOL LIFE

For cutting, milling, reaming, tapping and drilling metal, wood and plastics

SHORTENS CUTTING TIME BY UP TO 50%

Provides smoother, cleaner cutting and dramatically longer blade life

REDUCES HEAT AND FRICTION

Water-soluble so it cleans up with water

BIODEGRADABLE AND NON-TOXIC

EASY TO USE, FLIP-TOP BOTTLE FITS IN YOUR TOOL BOX



PRODUCT NO	DESCRIPTION	NFPA CODE SPECS
68040	6 oz / .17 liter bottle (12 per pack)	HMIS/WHMIS HEALTH INDEX – 1 FLAMMABILITY – 0 REACTIVITY – 0 PERSONAL PROTECTION – A
68047	1 gallon / 3.8 liter	
68048	5 gallon / 18.9 liter	
68050	55 gallon / 208.2 drum	

Use this product as it comes from the container—do not mix with water.

ANTI-SPATTER

Wipe Away Welding Spatter

SAFE TO USE

Non-toxic, non-explosive, non-combustible, and non-carcinogenic. No silicone or chlorine. No CFC's

ADVANCED 14 OUNCE CAN

Naturally compressed air (no propellants), easy to hold and use even with gloves

SPRAYS UPSIDE DOWN

NO WASTED PRODUCT

Full use of all 14 ounces

PROTECTS JIGS AND FIXTURES



PRODUCT NO	CONTAINER SIZE		CONTAINERS PER CASE	NFPA CODE SPECS
	GALLON	LITER		
69040	14 oz	397 gram compressed air can	12	HMIS/WHMIS HEALTH INDEX – 1 FLAMMABILITY – 0 REACTIVITY – 0 PERSONAL PROTECTION – A
69041	33 fl oz	946 ml trigger spray bottle	12	
69039	1	3.8	4	
69038	5	18.9	—	
69037	55	208.2 drum	—	



MSDS available in hard copy or downloadable from lenoxtools.com

FLUID REFERENCE CHART

Properties and Applications

LENOX METAL-WORKING FLUID	TYPE			METALS				APPLICATIONS					
	FLOOD COOLANT	SPRAY LUBRICANT	MANUAL APPLICATION	USE WITH SOLID METALS	USE WITH STRUCTURAL METALS	USE WITH FERROUS METALS	USE WITH NON-FERROUS METALS	BAND SAWING	CIRCULAR SAWING	DRILLING	TAPPING	MILLING	GRINDING
<i>CYCLE HD™</i>	•			•	•	•	•	•	•	•	•	•	•
<i>BAND-ADE®</i>	•			•	•	•	•	•	•	•		•	
<i>SAW MASTER™</i>	•			•	•	•		•	•	•			•
<i>LENOX LUBE®</i>		•		•	•	•		•	•	•	•	•	•
<i>C/AI LUBE</i>		•		•	•	•	•	•	•	•	•	•	•
<i>LENOX PROTOOL LUBE®</i>			•	•	•	•	•		•	•	•		

LENOX METALWORKING FLUID	CHEMICAL PROPERTIES							
	TYPE	COLOR	BIOCIDES	RUST/CORROSION INHIBITORS	CONTAINS MINERAL OR PETROLEUM OIL	CONTAINS CHLORINE OR SILICONE	CONTAINS SULFUR/SULPHONATES	CONTAINS CARCINOGENS
<i>CYCLE HD™</i>	Soluble Oil	Amber	Yes	Yes	Yes	No	No	No
<i>BAND-ADE</i>	Semi-Synthetic	Translucent Pink	Yes	Yes	No	No	No	No
<i>SAW MASTER</i>	Synthetic	Translucent Pink	Yes	Yes	No	No	No	No
<i>LENOX LUBE</i>	Synthetic Emulsion	Translucent Green	Yes	Yes	No	No	No	No
<i>C/AI LUBE</i>	Synthetic Oil	Translucent Blue	No	Yes	No	No	No	No
<i>LENOX PROTOOL LUBE</i>	Synthetic Emulsion	Translucent Yellow	Yes	Yes	No	No	No	No

LENOX METALWORKING FLUID	PHYSICAL PROPERTIES						
	SOLUBILITY IN WATER	SPECIFIC GRAVITY (H ₂ O=1)	pH RANGE	VISCOSITY AT 72°F	FLASH POINT	FREEZING POINT	BOILING POINT
<i>CYCLE HD™</i>	Emulsion	0.9-1.0	8.8 - 9.5	275 SUS	>93°C/200°F	<-26°C/-14.8°F	>93°C/200°F
<i>BAND-ADE</i>	100%	1.02	8.8 - 9.2	43 SUS	None	-6°C/21°F	99°C/210°F
<i>SAW MASTER™</i>	100%	1.076	9.7 - 10.0	42.7 SUS	None	-12°C/10°F	99°C/210°F
<i>LENOX LUBE</i>	100%	1.015	7.8 - 8.2	60 SUS	None	-7°C/19°F	99°C/210°F
<i>C/AI LUBE</i>	Insoluble	0.823	N/A	121 SUS	COC 290°F	N/A	N/A
<i>LENOX PROTOOL LUBE</i>	100%	1.03	8.0 - 8.5	500 SUS	None	-25°C/-13°F	99°C/210°F

DILUTION RATIO*	FLUID CONTENT	WATER CONTENT	APPLICATIONS
5:1	20%	80%	Heavy-duty sawing, difficult milling
10:1	10%	90%	Moderate to heavy-duty sawing, drilling, tapping and milling
20:1	5%	95%	Light-duty work
30:1	3%	97%	Grinding, light-duty work

*Dilution ratios are for flood coolants only. LENOX recommends 5:1 or 10:1, depending on the severity of the operation

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