

Technical Data Sheet



Features & Benefits:

	Features	Benefits
Performance	» High lubricity	» Longer tool life
	» Low viscosity	» Faster cut speeds
	» High heat dissipation	» Superior surface finish, tighter tolerances
		» Reduced drag-out, lower replacement costs
	» Highly stable, long solution life	» Lower chemical usage
		» Fewer change-outs, increased machine up-time
	» Non-corrosive, protects against rust	» Capital equipment longevity
	» Parts do not corrode	
	» Multi-machine, multi-application	» Reduce operational complexity
	» Cleans as it machines	» Reduces manufacturing steps
Worker Safety	» Safe, non-toxic, oil-free	» Better indoor air quality
	» Does not support microbial life	» Better work environment
	» (with proper maintenance)	» Minimizes risk of dermatitis or respiratory related illness
	» No odors/fumes	
	» No smoking	
	» Non-flammable	
	» Cleanliness	
Environmental	» Waste treatable, bio-degradable	» Easier to dispose
	» Rejects tramp oils	» Longer system life

Applications:

	Composites	Aluminum	Cast Iron	Steel	Stainless Steel	Specialty Alloys
Drilling	✓	✓	✓	✓	✓	✓
Drilling - Blind Hole	✓	✓	✓	✓	✓	✓
Sawing	✓	✓	✓	✓	✓	✓
Honing	✓	✓	✓	✓	✓	✓
Tapping	✓	✓	✓	✓	✓	✓
Boring	✓	✓	✓	✓	✓	✓
Turning	✓	✓	✓	✓	✓	✓
Grinding	✓	✓	✓	✓	✓	✓
Grinding - Centerless	✓	✓	✓	✓	✓	✓
Grinding - ID/OD	✓	✓	✓	✓	✓	✓
Broaching	✓	✓	✓	✓	✓	✓
Milling	✓	✓	✓	✓	✓	✓
Reaming	✓	✓	✓	✓	✓	✓
MAPAL Reaming	✓	✓	✓	✓	✓	✓

Waste Treatment:

There are no Federal regulations restricting the disposal of MetLube concentrate into municipal wastewater systems. However, local regulations may dictate specific discharges, BOD and/or COD limits.

All contaminants should be considered on an individual basis. Each machining operation is unique in its potential for contaminants. If there is sufficient potential for contamination that may be regulated by a government agency, test a sample for the suspected contaminants prior to disposal.

Please follow all Local, State and Federal regulations regarding the treatment of waste.

Physical & Chemical Properties:

Appearance Clear amber liquid
 Boiling Point ~215° F (102° C)
 Freezing Point 21° F (-6° C)
 Rinsibility No residue or film
 pH (concentrate) 9.8-10.8
 Evaporation Rate < Water
 Specific Gravity 0.996
 Vapor Pressure Slightly less than water
 Vapor Density 1
 Solubility in Water 100%

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The following chemicals are NOT used in MetLube Metalworking Fluid.

- » Oil (mineral or vegetable)
- » Morpholine or derivatives
- » Nitrite or nitrite-based compounds
- » Nitrite splitting compounds
- » Ethylenediamine
- » Ethylenediaminetetraacetic acid (EDTA) or its salts
- » Nitrilotriacetic acid (NTA) or its salts
- » Aromatic compounds
- » Polycyclic aromatic hydrocarbons (PAK, PAH, PCA) (constituents soluble in dimethylsulfoxide)
- » Benzo-(a)-pyrene
- » PCB and PCT
- » Phosphorous or phosphorous-based compounds
- » Chlorine or chlorine-based compounds
- » Sulfur or sulfur-based compounds
- » Organically bonded chlorine compounds
- » Phenols
- » p-tert. Butoxybenzoic acid
- » p-tert. Butylbenzoic acid
- » Organically bonded silicon
- » Biocides
- » Triethanolamine
- » Sodium petroleum or synthetic sulfonates
- » Glycerine
- » 1,2,3-propanetriol
- » Dipropylene glycol
- » Chlorinated oils (both paraffinic and naphthenic)
- » Polyalkylene glycols
- » Ethylene oxide
- » Propylene oxide polymers
- » Boron
- » Nonylphenol ethoxylates

Safety & Warning

Review the Safety Data Sheet (SDS) for appropriate health and safety warnings before use.

Skin: Avoid prolonged or repeated skin contact with concentrate. Wash area with soap and water after handling.

Eyes: Flush eyes with large amounts of water. If irritation persists, seek medical assistance.

Ingestion: Drink plenty of water or fruit juice. Do not induce vomiting. Seek medical assistance.

Spill response: Flush with water. Mop up any remainder and dispose of in accordance with federal, state or local regulations.

Storage: Will freeze in temperatures below 21° F (-6° C) and will exhibit “clouding” at temperatures below 46° F (8.0° C). Both freezing and “clouding” are reversible, and have no impact whatsoever on product performance.

Health & Safety - Required Tools

- » Safety glasses or face shield and Latex/Nitrile gloves at minimum
- » MetLube Literature:
 - Operating Guide
 - Control Plan
 - Troubleshooting Guide
 - MetLube PDS & SDS
- » MetLube “Tool Kit”
 - Refractometer
 - Short-range pH paper
 - TDS/Conductivity Meter
 - Calcium Hardness Test Strips
- » Understand troubleshooting and change-out procedures



MetLube
Metalworking
Fluid



Straight Oil
Hangsterfer's
Hard Cut 5418



Soluble Oil
HoCut
795B



Semi-Synthetic
Castrol
Alusol AU 39



Synthetic
Milacron
Cimfree 200