

CIMCOOL®

METALWORKING FLUIDS

MILPRO® 800 CF SERIES CHLORINE-FREE PREMIUM METALWORKING OILS

APPLICATIONS	<p>MILPRO® 810CF, 830CF, 835CF, 840CF, 850CF and 860CF are premium metalworking oils that provide excellent performance properties.</p> <p>Like all other CIMCOOL® and MILPRO® metalworking fluids, these new chlorine-free metalworking oils come to market after extensive testing and evaluation. They will meet your performance requirements, as well as your environmental, safety and health standards.</p>
FEATURES & BENEFITS	<ul style="list-style-type: none">▪ UNIQUE, NON-CHLORINATED LUBRICANT PACKAGES ▪ WIDE RANGE OF VISCOSITIES TO ADDRESS VARIOUS APPLICATIONS ▪ INCREASED PRODUCTIVITY WITH REDUCED TOOL OR GRINDING WHEEL USAGE ▪ PLEASANT ODORS ▪ CLEAR, LIGHT YELLOW LIQUIDS ▪ GOOD ANTI-MIST PROPERTIES ▪ FREE OF CHLORINE, ZINC, PHENOLS, HEAVY METALS AND OTHER MATERIALS THAT REQUIRE SPECIAL DISPOSAL PROCEDURES

MILPRO® 810CF	Applicable for use on ferrous and non-ferrous metals. Some of the highlighted applications are honing, grinding, turning, stamping, fastener grinding and milling. It is an excellent selection for grinding operations using CBN grinding wheels. Does not contain sulfur. Will not corrode copper.
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MILPRO® 830CF	Applicable for use on ferrous and non-ferrous metals. Some of the highlighted applications are valve grinding, thread grinding, and moderate-duty stamping and broaching. Does not contain sulfur. Will not corrode copper. Excellent general-purpose oil product for ferrous and non-ferrous metals.
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MILPRO® 835CF	Applicable for use on iron, steel, aluminum and yellow metals. Some of the highlighted applications are finish grinding, drilling, tapping, threading, turning, and milling. Does not contain sulfur. Will not corrode copper. It is an excellent general-purpose oil for ferrous and non-ferrous metals.
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MILPRO® 840CF	Applicable for use on ferrous metals. Some of the highlighted applications are deep hole drilling, gundrilling, tapping, stamping and broaching of ferrous metals. Contains active sulfur. Not recommended for copper. Excellent general-purpose oil product for ferrous metals.
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MILPRO® 850CF	Applicable for use on steels, exotics, and non-ferrous metals. Some of the highlighted applications are broaching, gear cutting, stamping and tapping. Does not contain sulfur. Will not corrode copper. Excellent product for use in screw machines and other applications where oil is used as a dual-purpose product.
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MILPRO® 860CF	Applicable for use on steels and some exotics. Some of the highlighted applications are heavy-duty broaching, gear shaving, stamping, form tapping and flute grinding. Contains active sulfur. Not recommended for copper.
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MILPRO[®] APPLICATION GUIDE MACHINING OPERATIONS

PRODUCT	BROACHING	THREADING/ TAPPING	GEAR HOBBING	DEEP HOLE	AUTOMATIC SCREW MACHINE / CHUCKER	TURNING, BORING, DRILLING, MILLING, TREPANNING
MILPRO [®] 810CF						X
MILPRO [®] 830CF		X				X
MILPRO [®] 835CF		X				X
MILPRO [®] 840CF		X			X	X
MILPRO [®] 850CF	X	X	X	X	X	X
MILPRO [®] 860CF	X	X	X	X	X	X

MILPRO[®] APPLICATION GUIDE GRINDING OPERATIONS

PRODUCT	FINISH GRINDING	FORM GRINDING ON DRILLS, TAPS, & REAMERS	CRUSH AND OTHER FORM GRINDING	HONING
MILPRO [®] 810CF	X			X
MILPRO [®] 830CF	X			X
MILPRO [®] 835CF	X			
MILPRO [®] 840CF			X	
MILPRO [®] 850CF		X	X	
MILPRO [®] 860CF		X	X	

MILPRO[®] APPLICATION GUIDE MATERIALS

Product	IRON	STEEL	ALUMINUM	COPPER
MILPRO [®] 810CF	X	X	X	X
MILPRO [®] 830CF	X	X	X	X
MILPRO [®] 835CF	X	X	X	X
MILPRO [®] 840CF	X	X	X	
MILPRO [®] 850CF	X	X	X	X
MILPRO [®] 860CF	X	X	X	

ITEM / PRODUCT	MILPRO® 810 CF	MILPRO® 830 CF	MILPRO® 835 CF	MILPRO® 840 CF	MILPRO® 850 CF	MILPRO® 860 CF
FLASH POINT (Deg. F)	255	365	365	365	455	390
VISCOSITY (S.U.S. @ 100° F)	47	78	150	80	223	220
APPLICABLE VISCOSITY RANGE	40 to 70	71 to 150	120 to 200	71 to 150	151 to 250	151 to 250
TOTAL SULFUR (%)	0.0%	0.0%	0.0%	2.1%	0.0%	2.1%
ACTIVE SULFUR (%)	0.0%	0.0%	0.0%	2.0%	0.0%	2.0%
CHLORINE (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FRICTION MODIFIER	Yes	Yes	Yes	Yes	Yes	Yes
CORROSION INHIBITOR	Yes	Yes	Yes	Yes	Yes	Yes
ANTI-MIST PROPERTIES	Good	Good	Good	Good	Good	Good
V-TOOL RATING *	2.0	1.5	1.5	1.5	1.5	1.5
V-TOOL CHIP COLOR **	Gray	Gray	Gray	Gray	Gray / Sl. Blk.	Gray / Sl. Blk.
V-TOOL SMOKE ***	None	None	None	None	None	None
V-TOOL TEST GPM FLOW	0.94	0.45	0.35	0.45	0.15	0.15
FALEX LOAD (lbs.)	4150	4150	4150	4500	4150	4500
FALEX TORQUE (lbs./in.) ****	45	45	46	49	46	52

- * Rating Scale: 1-Excellent, 2-Good, 3-Satisfactory, 4-Fair, 5-Poor
The V-Tool Test measures the cutting forces needed to remove a particular amount of metal in a set period of time. NOTE: Chlorine-Free competitive metalworking oils tested received a 2 to 3 rating on the V-Tool Test.
- ** Competitive Metalworking oils gave black chips when run on V-Tool.
- *** Competitive Metalworking oils produced moderate to high amounts of smoke during V-Tool testing.
- **** Competitive Metalworking oils tested, typically had Torques in excess of 100 lbs./in. when loads exceeded 1700 lbs.

OTHER RECOMMENDATIONS	Add no other substances to the concentrate or mix unless approved by CIMCOOL® Technical Services.
PACKAGING	Available in 55-gallon drums, and bulk containers.
For additional information concerning MILPRO® Oils, refer to its OSHA MSDS or contact CIMCOOL® Technical Services at 1-513-458-8199. Reprints/Updates of this Product Information Flyer (PIF) can be found on our web site, www.cimcool.com or from your Milacron representative.	
Minor formulation changes or normal variations in the manufacture of this product may cause slight variances in the data presented on this sheet. Consumable Products Division/ Milacron Marketing Company Cincinnati, Ohio 45209	
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