EcoLine® Cutting Fluid

PRODUCT DESCRIPTION
EcoLine Cutting Fluid is a multifunctional biodegradable concentrate for metal cutting operations. This liquid cools the work pieces and tools, prevents welding of metals during the metalworking process and provides excellent corrosion protection and lubrication during the cutting process.

High-performance characteristics make EcoLine Cutting Fluid ideally suited for heavy-duty cutting, milling, turning, drilling, broaching and other machining operations.

EcoLine Cutting Fluid is packaged in a pre-diluted “ready-to-use” 16 oz. bottle with squirt top application. EcoLine Cutting Fluid is also available in bulk concentrate, packaged in 5 gallon pails and 55 gallon drums. The EcoLine bulk concentrate can be diluted from 1:40 to 1:20.

When added to water in the ratio of 1:40 to 1:20, EcoLine Cutting Fluid gives a stable emulsion which provides excellent cooling and little or no smoke during use. This concentrated fluid can be used in small amounts providing cost savings. When used as directed, EcoLine Cutting Fluid prevents corrosion during in-plant processing, storage, and export shipment for up to 12 months.

EcoLine Cutting Fluid has been certified as a USDA certified biobased product and has been awarded USDA BioPreferredSM designated for Metalworking Fluids for Federal Preferred Purchasing (www.biopreferred.gov)

FEATURES
• USDA Certified BioBased product
• Contains 64% biobased content
• USDA BioPreferredSM designated Metalworking Fluid (general purpose and high performance) for Federal Preferred purchasing
• Environmentally friendly and biodegradable
• Replaces hazardous mineral oil

APPLICATION
Add EcoLine Cutting Fluid to water using a high dispersion-mixing blade. Mix for 5-10 minutes. The emulsion should remain stable indefinitely. In case of separation, emulsion can be remixed.

TYPICAL APPLICATIONS
• Lubricant for heavy-duty rolling, grinding, extruding, stamping, and cutting
• In-plant machining
• Biodegradable preservative for hot-rolled, cold-rolled, galvanized, and aluminized steel during operation, storage, and shipment
• Hydrostatic testing
• Machining coolant

TYPICAL PROPERTIES
Appearance Clear amber liquid
Non-volatile Content 89-93%
pH 8.5-9.3 (1% aqueous)
Density 7.8-7.9 lb/gal (0.93-0.95 kg/l)
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TEST RESULTS
ASTM D 1748 (Humidity Chamber)
Pass 220 hours (for 2.5% solution)
Pass 800 hours (for 5% solution)

ASTM D 4627-86 (Cast Iron Chip Test)
Pass (1% solution)

ASTM D 2670 (Falex Pin and VEE Block Wear Test)
Conditions:
Run in/5 min. 350 lb (159 kg)
Gage load/15 min. 900 lb (408 kg)

Results:
Total Teeth Wear 17 (2.5% solution)
10 (5% solution)
Seizure (Yes/No) No (2.5% solution)
No (5% solution)

Tapping Torque Test
Specimen Type 1215 steel
Speed (high speed taps) 400 rpm
Conventional Cutting Fluid 6.257 (2.5%)
6.195 (5%)
EcoLine Cutting Fluid 5.962 (2.5%)
5.814 (5%)

STORAGE AND PACKAGING
EcoLine Cutting Fluid is packaged in 16 oz. (455 ml) ready-to-use, 5 gallon (19 liter) pails concentrate, 55 gallon (208 liter) drums concentrate, liquid totes, and bulk. The product should be stored sealed. Agitate before each use. The shelf life of EcoLine Cutting Fluid is up to 24 months, it is freeze/thaw stable

Note: Please see the Safety Data Sheet (SDS) for proper handling of the product.

FOR INDUSTRIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN
KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION
CONSULT SAFETY DATA SHEET FOR MORE INFORMATION

LIMITED WARRANTY
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printed on recycled paper 100% post consumer

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