

PRODUCT DATA

CINDOL® TR 4047-FF

**EMULSIFIABLE CUTTING FLUID DESIGNED FOR MACHINING
MAGNESIUM ALLOYS. ND ADDITIVE IMPROVES FINISH,
LUBRICATES, COOLS**

Cindol TR 4047-FF is a medium duty machining coolant that addresses the problems of reduced emulsion stability and decreased sump life associated with machining magnesium and multi-metals with coolant from the same central system.

Typically, magnesium fines contaminate a coolant and increase water hardness at an extremely rapid rate; hardnesses of several thousand ppm are common. Since water hardness at these levels will cause ordinary emulsifiable coolant to split, sump life was minimal.

Cindol TR 4047-FF incorporates a special emulsifier package designed to function even when magnesium fines build to previously intolerable levels. The patented ND additive dramatically lowers the coefficient of friction between metal surfaces; this improves results in finish, tool life and production rates.

Cindol TR 4047-FF is used for turning, drilling, tapping and broaching and will tolerate water hardness up to 3,000 ppm.



Houghton International Inc.

Madison and Van Buren Ave., P. O. Box 930, Valley Forge, PA 19482-0930
(610) 666-4000 Telefax (610) 666-1376

PERFORMANCE CHARACTERISTICS

A large automotive manufacturer machining magnesium transmission components increased tool life 40-60%, improved part micro-finish, decreased scrap about 70% and increased sump life with **Cindol TR 4047-FF**.

FEATURES

- * Tolerates magnesium and metal salt build-up in sumps
- * Excellent machining capability
- * Rapid heat removal
- * Clean running
- * Excellent rust/corrosion protection
- * Waste treatable
- * Long sump life

BENEFITS

- * Increased emulsion stability and sump life
- * Increased tool life, increased speeds and feeds, improve micro-finishes
- * Maintains dimensional control
- * Drops fines quickly, maximizes worker acceptance, prevents dirt and swarf build-up on machine tools
- * In-process protection of machinery and parts, fewer machine tools
- * Assures low treatment costs
- * Reduced maintenance costs

TYPICAL PHYSICAL PROPERTIES

Appearance, Neat	Hazy amber fluid
Appearance, 5% Emulsion	Very light brown
pH, 5% Emulsion	10.0
Specific Gravity	0.93

RECOMMENDED USE CONCENTRATIONS

Machining 10:1 to 20:1

Cindol TR 4047-FF should be added directly to water with good agitation. Premixing the coolant outside the machine sump is recommended.

HOW TO CHECK CONCENTRATION

The American Optical Refractometer is the easiest way. The factor is 1.0. The refractometer reading can be read directly as emulsion concentration. Note that any tramp oil or other dissolved solids will enter into the total refractometer reading.

SHELF LIFE

Under normal conditions, the recommended shelf life is six (6) months.

SHIPPING INFORMATION

Cindol TR 4047-FF is shipped in 55 (U.S.) gallon (208 liter) steel drums and in bulk.

SHIPPING CLASSIFICATION

Metal Cutting and Drawing Compound

STORAGE/HANDLING/DISPOSABILITY

No health or safety hazards exist when **Cindol TR 4047-FF** is stored, used and disposed of in accordance with instructions given on the Material Safety Data Sheet for this product.

WARRANTY

The information given here is considered to be correct and is offered for your consideration, investigation and verification. No warranties are expressed or implied, since the use of our products is beyond our control. Statements concerning the use of Houghton products are not to be construed as recommending the infringement of any patent.

EXPORT STATEMENT

This commodity and its technology are subject to the export control laws and regulations of the United States Government. Buyer agrees that it shall not make any disposition, by way of export, diversion, transshipment, re-export or otherwise, except as expressly permitted under United States law.

10/96