

# SOLUBLE #2

## Metal Working Fluid with Bactericide



### Features

- Effective rust inhibitor
- Prevents disagreeable odors
- Extreme pressure agent added to prolong tool life
- Extra emulsifier
- Excellent hard water stability
- Contains a broad spectrum biocide, approved by agriculture Canada for metalworking applications
- High oil content and balanced formulation

### Benefits

- Versatile can be used for many machining operations
- Effective forms a stable emulsion for maximum cooling benefit
- Convenient initial bactericide is already included

**SOLUBLE 2** oil is a metal-working fluid designed to emulsify easily with water and is especially effective in the machining of ferrous metals. It is also suitable for the machining of nonferrous metals where some discoloration of the work-piece is acceptable. It has an effective rust inhibitor and a bactericide to prevent disagreeable odors. In its heaviest concentrations (1 part oil to 10 parts water) it is suitable for slow-speed, medium to heavy machining operations that include threading, tapping, drilling and broaching.

**SOLUBLE 2** in lesser concentrations (1:20 or 1:30) is suitable for medium and high speed machining and gives very good results in finishing applications. The action of shearing a chip away from a metal surface, which is the basis of virtually all machining operations, generates heat. Unless this heat is removed it can affect the finish and shorten the tool life. A lubricant will help to reduce heat generation by reducing rubbing friction. Soluble oils have shown themselves to offer the best of both worlds. Heavy machining operations can cause the chip material to erode away the tool face and shorten tool life; an extreme pressure agent is helpful in reducing this damage.

For long fluid life it is very important to keep the fluid clean. The fluid should be filtered to remove swarf. The pH of the emulsion must be controlled to prevent the growth of bacteria and fungi otherwise they will weaken the emulsion, causing the oil to separate and releasing objectionable smells. The pH can be adjusted with the addition of a suitable agent. If an incorrect pH causes a problem, it can be corrected by adding a bactericide or fungicide.

For stable emulsion, always start by adding the oil to water, about 1 part oil to 4 parts water. Then dilute the emulsion with more water to the desired strength. Refer to the chart overleaf.

**DO NOT LET SOLUBLE 2 FREEZE**

# SOLUBLE 2

## Typical performance results

METAL	IRON			ALUMINUM	COPPER, BRASS, BRONZE	MAGNESIUM
MACHINABILITY	<55%	55%-70%	>70%			
MILLING, DRILLING & BORING	1:10	1:15	1:20	1:20	1:20	NOT RECOMMENDED
BROACHING	1:10	1:10	1:15	NOT RECOMMENDED	1:15	NOT RECOMMENDED
HOBGING	NOT RECOMMENDED	NOT RECOMMENDED	NOT RECOMMENDED	1:15	NOT RECOMMENDED	NOT RECOMMENDED
FORM GRINDING	1:20	1:25	1:30	NOT RECOMMENDED	1:30	NOT RECOMMENDED
PLAIN GRINDING	1:25	1:40	1:40	1:40	1:40	NOT RECOMMENDED
REAMING	1:10	1:10	1:10	1:20	1:20	NOT RECOMMENDED
SAWING, TURNING, TAPPING, THREADING	1:10	1:15	1:20	1:20	1:20	NOT RECOMMENDED

- *DO NOT USE any soluble cutting oil for machining Magnesium due to risk of fire.*
- *DO NOT ALLOW TO FREEZE storage for long periods at low temperatures can affect the solubility of various components in this product causing them to separate.*

## Available sizes & part numbers

	18.9 L (5.0 US Gal)
SOLUBLE #2	F0090540

Check with sales representative or website for the latest product approvals.



Lubricants

[www.iringlubricants.com](http://www.iringlubricants.com)