



Product Data Sheet

SUPER SOLUBLE

PREMIUM, WATER SOLUBLE COOLANTS

May 2007

Super Soluble is a premium, water-soluble semi - synthetic coolant for use in a variety of machining operations.

In service **Super Soluble** offers the following benefits:

- ◆ Premium resistance to bacterial and fungal growth for extended coolant life
- ◆ Superior protection against corrosion and rust
- ◆ Ability to machine at higher speeds
- ◆ Excellent cooling and lubricating properties
- ◆ Resistance to foaming
- ◆ Extended tool life
- ◆ Resistance to forming of gummy-tacky residue

Product Applications

Super Soluble is a semi-synthetic formulation that mixes easily with water in all proportions to form a translucent blue solution. As a micro emulsion, it provides for longer emulsion life, improved work piece visibility, and long term stability against tramp oil contamination. **Super Soluble** coolant is very resistant to physical or chemical changes in service, especially to the development of rancidity and odour. It is extremely effective in preventing in-process rust on exposed machine and tool components and work parts. It is especially effective in controlling corrosion on cast, gray, nodular and malleable iron. **Super Soluble** coolant contains non-ferrous inhibitors, which prevent staining on aluminum alloys, brass, copper and bronze. The product is safe, clean and easy to use; it does not leave a slippery or sticky film on dried, machined parts.

Super Soluble coolant can be used economically for general purpose machining and grinding operations of ferrous and non-ferrous metals including carbon/cast steel, cast/nodular/gray iron, stainless and high alloy steels. It can also be used for light to moderate duty applications on copper and aluminum alloys; it cannot be used for machining magnesium. Water/oil dilution ratios between 5:1 and 25:1 can be used to meet the performance requirements for a particular machining operation.

Machining Operation

	Ratio of Water to Soluble Fluid
	Super Soluble
Hobbing, shaping, broaching, pipe threading, multiple point threading & tapping	10:1 to 15:1
Turning, milling, forming, multiple spindle screw machines, auto lathes & screw machines	5:1 to 25:1
Drilling & boring; sawing	10:1 to 25:1
Grinding	10:1 to 25:1

Preparation and Care of Emulsion

To obtain the best results, the coolant system should be drained, flushed and cleaned to remove all traces of the existing old product before adding these new formulations. **Super Soluble** should never be added as make-up to another coolant system; the products may be incompatible and result in unsatisfactory performance. When preparing dilutions, the concentrate should always be added to the water to prevent the possible formation of an invert emulsion. The effective concentration of dilutions can be checked using a

refractometer. Since these formulations contain some water, the products should always be stored indoors during the winter to prevent freezing and separation of the product.

Product Handling and Maintenance

Super Soluble are manufactured from high quality synthetic base stocks and/or high quality petroleum base stocks, carefully blended with selected additives. As with all of our products, good personal hygiene and careful handling should always be practiced. Avoid prolonged contact to skin, splashing into the eyes, ingestion or vapour inhalation. These products contain materials, which are irritating, and may injure eye tissue if not removed promptly. Frequent or prolonged contact may irritate the skin. Please refer to the Material Safety Data Sheet for further information.

When no longer suitable for service, **Super Soluble** should be disposed of through an authorized liquid waste disposal company. They should not be mixed with used petroleum base oils, which are collected and recycled by a re-refiner.

Note: These products are controlled under Canadian WHMIS legislation

Typical Properties

	Super Soluble
Density @ 15°C, kg./m ³	945
Appearance Concentrate 5% Emulsion	Dark Blue Translucent White / Blue
Flash Point, °C	None
Freezing Point, °C	-2
pH Concentrate 5% Emulsion	9.6 9.0
Total Chlorine, wt.%	None
Total Sulphur, wt.%	0.26

The typical properties shown above are representative of current production. Some are controlled by manufacturing and performance specifications while others are not. All may vary within modest ranges.