CHEVRON SOLUBLE OIL B

PRODUCT DESCRIPTION

Chevron Soluble Oil B is used broadly in machine shops as a multifunctional cutting fluid. It is primarily formulated to cool and lubricate the contact point of the tool and the work piece.

CUSTOMER BENEFITS

Chevron Soluble Oil B delivers value through:

- **Minimal separation** — Excellent emulsion even with hard water
- **Good rust protection** for steel work and machined parts even when water/oil emulsion ratios are 80:1
- **Cooling** maximized by metal wetting. In addition, promotes good chip settling.
- **Minimal foaming** — Possibility of sump overflow minimized
- **Good stability in storage** — Minimal tendency to turn rancid
- **Good ability to control bacterial growth and rancid odors**

FEATURES

Chevron Soluble Oil B:

- helps prevent rusting or corrosion of the machined metals
- helps control the growth of bacteria — which is a constant problem in soluble oil circulating systems due to outside contamination
- minimizes surface foam
- speeds the release of entrained air which could cause pump cavitation

This is an extremely versatile fluid designed to meet many of the situations encountered in the metalworking industry.

Chevron Soluble Oil B is an emulsifying oil that readily mixes with water, forming a homogeneous and exceptionally stable emulsion. It is used in the machining of both ferrous and nonferrous metals, particularly when cutting with carbon or high speed steel or tungsten carbide tools. It contains an effective biocide that combats bacterial growth, rancidity, and odor in machine sumps.

APPLICATIONS

Chevron Soluble Oil B is recommended for metals (except magnesium) where maximum cooling is desired — particularly when cutting with carbon, high speed steel, or tungsten carbide tools.

Chevron Soluble Oil B is used extensively in milling, drilling, gear cutting, turning, planing, shaping, sawing, and grinding operations.

Chevron Soluble Oil B is typically diluted in water/oil ratios ranging from 10:1 to 50:1. See the Chevron Soluble Oil Mixing Recommendations chart for the proper water/oil ratio for each application.

Always add oil to water to avoid forming sticky invert emulsions that do not emulsify properly in water.

Chevron Soluble Oil B provides excellent in-process corrosion protection. Use of this product as a metal protective fluid for short-term rust protection is not recommended.

Do not recommend Chevron Soluble Oil B emulsions for operations involving magnesium. Hot magnesium is a fire hazard when it contacts water.

Emulsions of soluble metalworking fluids and water may become contaminated with harmful microorganisms such as bacteria and fungus, which can cause illness and infection. This can occur even in emulsions with fluids that initially contain some biocide because the biocide can be depleted during service. A metalworking fluid maintenance program should be followed in order to control this hazard. Such a program may require the use of biocides.

Product(s) manufactured in the USA.
Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

A **Chevron** company product

1 March 2022
MWF-40

TYPICAL TEST DATA

	B
Product Number	*233703*
SDS Number	*7090*
API Gravity	21.6
Viscosity, Kinematic cSt at 40°C cSt at 100°C	 38.0 5.2
Viscosity, Saybolt SUS at 100°F SUS at 210°F	 198 43.7
Flash Point, °C(°F)	160(320)
Pour Point, °C(°F)	-30(-22)
Total Sulfur, wt %	0.30
Active Sulfur, wt %	None
Volatile Organic Content (VOC), g/L ASTM E-1868-10	 44

Minor variations in product typical test data are to be expected in normal manufacturing.

MIXING RECOMMENDATIONS

First figure indicates parts of water. Second figure indicates parts of Chevron Soluble Oil B.

Material	Turning, Shaping, Planing, Drilling	Milling	Pipe and Plain Threading	Automatic Screw Machines	Grinding	Thread Grinding	Deep Drilling	Gear Shaving or Cutting
Plain, medium, and high carbon steels	20:1	20:1	→	20:1	50:1	20:1	→	20:1
Alloy steels	15:1	15:1	→	15:1	50:1	15:1	→	15:1
Ingot iron, wrought iron, low carbon steels	15:1	15:1	→	15:1	50:1	15:1	→	15:1
Stainless steels, tool and die steels	10:1	10:1	→	10:1	50:1	10:1	→	10:1
Aluminum and aluminum alloys	25:1	25:1	30:1	30:1	50:1	30:1	20:1	30:1
Copper and brass	25:1	25:1	30:1	30:1	→	→	20:1	30:1
Zinc and zinc alloys	25:1	30:1	30:1	30:1	→	→	20:1	→
Bronze and high strength copper alloys	10:1	10:1	10:1	10:1	50:1	10:1	→	10:1
Magnesium and magnesium alloys	**FIRE HAZARD**							
Titanium and titanium alloys	10:1	10:1	→	→	→	→	→	→
Nickel and nickel alloys	10:1	10:1	→	10:1	50:1	10:1	→	10:1
Cast iron	Dry	Dry	Dry	→	Dry	Dry	Dry	Dry

→ Seldom used.

Emulsions of soluble metalworking fluids and water may become contaminated with harmful microorganisms such as bacteria and fungus, which can cause illness and infection. This can occur even in emulsions with fluids that initially contain some biocide because the biocide can be depleted during service. A metalworking fluid maintenance program should be followed in order to control this hazard. Such a program may require the use of biocides.

Dilution Ratio	10:1	15:1	20:1	25:1	30:1	50:1
Refractometer Reading	11.0	7.5	5.2	5.2	3.2	1.7

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.