



SARASWATI OIL EMPORIUM

SOE Soluble MWF 500

SOE Soluble MWF 500 is a superior grade soluble cutting oil blended from highly refined base oil and special additive to provide superior tool life and other benefits. It has excellent emulsion stability with hard water.



APPLICATIONS:

SOE Soluble MWF 500 is developed with a high mineral oil content for a variety of metal cutting operations where cooling is important. This high performance soluble oil is designed specially for general machining like turning, planning, drilling, milling of ferrous metals.

Recommended Use	Cast Iron	Alloy Steel	Carbon Steel	Al. Alloy	Yellow Metals
Grinding	--	--	--	--	--
General Machining	√√	√√	--	√	--
Drilling	√√	√√	--	√	--
Milling	√√	√√	--	√	--

PERFORMANCE/BENEFITS:

- **Good Rust Protection** – for both machine tools and work pieces.
- **High Lubricity** – provides excellent lubricity and surface finish. Extends tool life.
- **Low Foaming Tendency** – allows high pump pressures and helps maintaining continuous oil film between moving parts. Compatible with soft water.

- **High Emulsion Stability** – readily emulsifies to form stable milky emulsion (oil in water type, water hardness 400 ppm) and resists bacterial growth.
- **Environment Friendly** – formulation is free of chlorine, phenol etc. harmful chemicals.
- **Concentration:** The type of machining, the hardness of water and the corrosion protection required decide the concentration. It is typically used at 3% to 5% concentration. Refractometer factor is 1.0.

SPECIFICATIONS:

- IS 1115:1986 (Reaffirmed 2013)

STORAGE & HANDLING:

The product should be stored inside. Keep it properly sealed to avoid contamination. Avoid freezing. Shelf life is 3 yrs. under protected storage conditions.

HEALTH & SAFETY:

They are unlikely to be hazardous when properly used in recommended applications. Contamination of the oil from other oils, greases, chemicals, dirty water etc. can occur during the use. It should be avoided. Regular monitoring of the in-use product is recommended.

TYPICAL PHYSICO-CHEMICAL DATA: SOE Soluble MWF 500

Characteristics	Method	Value
Colour, Oil	Visual	Brown
Appearance, Oil	Visual	Clear
Colour, Emulsion	Visual	Milky White
Copper Corrosion, 100°C, 3 hrs.	ASTM D130	1
Emulsion Test, 5:1 & 20:1 ratio in water of 400 ppm hardness (as CaCO ₃)	IS 1448 P:68	No oil, no cream
Frothing Test, 5:1 & 20:1 ratio in water of 200 ppm hardness (as CaCO ₃)	IS 1448 P:99	Passes (no froth)
Cast Iron Corrosion Test 20:1 ratio emulsion with 400 ppm hardness (as CaCO ₃)	IS 1448 Appendix A	0/0-0 (no corrosion) Passes
Thermal Stability Test	IS 1448 P:100	Passes
Refractometer Factor		1.0
pH, at 5% in distilled water	--	9.3

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