

Soluble Oil 282



SOLUBLE OIL NO. 282 was scientifically developed for rolling, forming, drawing, stamping, punching and cutting operations for a variety of alloys.

The formulation provides many outstanding qualities:

1. The emulsifiers and E.P. additives are all synthetic. This is particularly beneficial in cold roll steel rolling as it burns clean and does not produce the smut commonly associated with metallic soap-sulfonate emulsifiers.
2. Emulsions of No. 282 possess outstanding adhesion to metal in dilutions of 5% or more with water. The emulsion coats the work piece evenly and forms a uniform oily film on the metal.
3. Emulsions of No. 282 in water provide excellent rust protection when traces of emulsion are left on coiled steel of ferrous parts.
4. Provides long coolant life. The synthetic chemicals in the oil are not as susceptible to bacteria spoilage as soaps and fats. SOLUBLE OIL NO. 282 also contains biostatic additives.
5. Readily forms oil in water emulsions in hot or cold water and hard and soft water. The emulsion forms a cream on standing. Mild agitation maintains a uniform emulsion.
6. It can be used straight for many punching and forming jobs that can not use water. The formula can easily be removed at the end of all operations. It is generally used in water. Heavy drawing and blanking – 1/1 to 3/1; Cold roll steel rolling and steel wire drawing – 10/1 to 20/1; Light forming, punching and shearing – 5/1 to 10/1. Machining operations such as tapping, broaching use at 10/1. Other machining operations can be done at 20/1 to 30/1. It is not recommended for grinding.

TYPICAL CHARACTERISTICS

Color: Clear light yellow at room temperature.

pH: 5% emulsion	=	9.3
Specific Gravity @ 60° F.	=	0.927
Weight per gallon	=	7.73
Flash Point	=	330° F.S.U.
Viscosity @ 100° F.	=	175 sec. S.U.
Falex EP Test, 5% dilution, direct load	=	2000 lbs., torque 60 lb-in.
Four-ball Wear Test (D-2266) 1 hr., 1200 rpm, 40 Kg.		
Load Wear Index, Kg.	=	29.74
Weld Load, Kg.	=	200
Seizure Load, Kg.	=	80
Coefficient of Friction	=	0.07

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Make-up dilutions can generally be at a higher ratio due to water evaporation. A periodic check of dilution concentration should be made and the make-up dilution added accordingly. A guide to determining dilution strength with a REFRACTOMETER is given in the handy chart below:

<u>Dilution</u>	<u>Percent Emulsion</u>	<u>Refractometer Reading</u>
4/1	25.0	25
5/1	20.0	20
6/1	16.7	16.5
7/1	14.3	14.4
8/1	12.5	12.5
9/1	11.1	11.25
10/1	10.0	10.0
15/1	6.67	6.7
20/1	5.0	5.0
30/1	3.33	3.3
40/1	2.50	2.5
50/1	2.0	2.0
60/1	1.67	1.7
70/1	1.43	1.4
80/1	1.25	1.25
90/1	1.11	1.1
100/1	1.0	1.0