

# PIRANHA

## A.P. SOLUBLE OIL S-40

PREMIUM QUALITY ALL PURPOSE SOLUBLE OIL



A PRODUCT OF LUBRICATING SPECIALTIES COMPANY

### Product Description



**A.P. SOLUBLE OIL S-40** is manufactured from a select naphthenic base oil and compounded with an emulsifier which forms a stable milky-white emulsion when mixed with water. Additionally, it is inhibited against foaming, contains excellent rust preventive properties, and will emulsify readily in safe or hard water. This nitrite-free and phenol-free cutting fluid is safe to use in high speed cutting operations.

### Features & Benefits:

- Economical.
- Forms stable emulsion.
- Foam inhibited.
- Rust inhibited for protection of machine parts and work piece.
- Safe to use: nitrite-free and phenol-free.

### Applications & Uses:

- Used in cutting of ferrous and non-ferrous metals.
- Recommended for use in milling, boring and turning operations on non-ferrous and ferrous metals with machinability rating of 50-100. Approximate water to oil ratio; 30:1 for aluminum and copper -10:1 for copper alloys 15:1 for ferrous metals.
- Also used for such machining operations as planing and shaping, plain drilling and sawing of non-ferrous and ferrous metals with machinability rating 30-100.
- Approximate water to oil ratio - 30:1 for aluminum and copper -10:1 for copper alloys - 20:1 for ferrous metals.
- Used for plain grinding operations of ferrous and nonferrous metals at water to oil ratio of 40:1 to 50:1.
- Other uses: Rust preventative for automotive radiators at 40:1 ratio. Rust preventative in water hydraulic system at 10:1 ratio.
- Anti-mist allows use of product in high speed cutting operations.

#### NOTE:

- \* ALWAYS ADD NEAT OIL TO THE WATER NEVER ADD WATER TO THE OIL. THIS WILL AVOID THE POSSIBILITY OF GETTING AN INVERT EMULSION (WATER DROP SURROUNDED BY OIL) WHICH HAS LOW COOLING ABILITY.
- \* NEVER USE SOLUBLE OIL EMULSIONS FOR CUTTING MAGNESIUM. HOT MAGNESIUM AND WATER ARE A FIRE HAZARD.

### Typical Test Data

TEST	ASTM	S-40	Refractometer vs. Dilution Graph														
Gravity °API	D-4052	20.6	<table border="1"> <caption>Refractometer vs. Dilution Graph Data</caption> <thead> <tr> <th>Dilution</th> <th>Refractometer Reading</th> </tr> </thead> <tbody> <tr> <td>5:1</td> <td>1.8</td> </tr> <tr> <td>10:1</td> <td>0.8</td> </tr> <tr> <td>20:1</td> <td>0.4</td> </tr> <tr> <td>30:1</td> <td>0.3</td> </tr> <tr> <td>40:1</td> <td>0.2</td> </tr> <tr> <td>50:1</td> <td>0.1</td> </tr> </tbody> </table>	Dilution	Refractometer Reading	5:1	1.8	10:1	0.8	20:1	0.4	30:1	0.3	40:1	0.2	50:1	0.1
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Appearance	----	Bright & Clear															
Color	D-1500	3.5															
Viscosity: cSt. @ 40° C.	D-445	31.75															
Cold Test @ 40° C.	----	No Separation															
Emulsibility	----	Pass															
Emulsion Stability	----	Pass															
Foaming	D-892	Pass															
pH, 5% in DI Water	----	9.2															

\* CONTAINS HIGH PERFORMANCE ADDITIVE CHEMISTRY.  
VALUES SHOWN HERE ARE TYPICAL AND MAY VARY.

## TECHNICAL PRODUCT INFORMATION

PRODUCT CODE: 39004

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