

SPIRIT 620 S

Bio-stable Semi-Synthetic Metalworking Fluid

DESCRIPTION

SPIRIT 620 S represents the most up-to-date technology in the development of a bio-stable EP fortified semi-synthetic metalworking fluid. It accomplishes this without formaldehyde releasing biocides, secondary amines, or amines of questionable safety. It is non-irritating to operators, as its basicity is obtained from materials used in the cosmetics industry. It is multi-metal compatible, has high lubricity for both aluminum and steel cutting, yet still has excellent ferrous rust protection with a breakpoint of 2% on cast iron chips. The surfactants used in **SPIRIT 620 S** are non-ionic, allowing the product to form a stable micro emulsion with water of all qualities, from 0 to 700 ppm, yet very waste treatable by acid-alum methods.

SPIRIT 620 S has the following characteristics and benefits:

- Easily forms a translucent micro-emulsion in all types of water
- Long coolant sump life
- Bio-stable without formaldehyde release
- Contains no nitrites, phenols or di-ethanolamine
- Improved tool life
- No sulfur
- Has an effective rust inhibitor
- Cleaner machines
- Excellent work piece visibility
- Greater operator acceptance
- Rapid cooling
- Will not stain aluminum
- Excellent for recycling
- Low foaming in soft water
- Splits out tramp oil quickly

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TOTAL Lubricants USA, Inc.

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SPIRIT 620 S**APPLICATION**

SPIRIT 620 S is recommended for light to heavy duty ferrous applications and light to moderate duty aluminum applications. Operations include: milling, turning, drilling, boring, O.D. and I.D. grinding operations including centerless and surface grinding.

MIXING RATIOS

The standard dilution ratio of water to oil is 15:1. **SPIRIT 620 S** may be mixed satisfactorily from 10:1 to 20:1, depending upon the type and severity of the operation. For grinding operations, 20 to 25 parts water to 1 part **SPIRIT 620 S** is recommended. The concentration should be adjusted as necessary to maximize performance.

WATER HARDNESS TOLERANCE

SPIRIT 620 S will maintain emulsion stability safely in water with 700 ppm hardness.

TYPICAL SPECIFICATIONS

Appearance	Clear amber liquid
Odor	Very mild amine odor
Specific Gravity @ 60 F	1.07
Density @ 60 F, lbs/gal	8.9
Sulfur Content	Nil
Chlorine Content	5 – 6%
pH @ 10 %	9.3
Cast Iron Chip Rust Break Point	2%
Copper Corrosion, D-130	1a-1b
Refractive Index, °BRIX	
10% fresh dilution	6.8

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