

SPIRIT 3310 S



Metalworking



TOTAL

Heavy-Duty, Micro-Emulsion for Aluminum Alloys

APPLICATIONS

- **SPIRIT 3310 S** is a semi-synthetic coolant brings the highest level of performance to machining of aluminum alloys including aerospace aluminum.
- **SPIRIT 3310 S** is also suitable for some steel alloys.
- It meets the needs of other applications such as gundrilling that require high lubricity.
- The outstanding performance characteristics of this micro-emulsion are obtained through a synergistic blend of mineral oil and synthetic esters.
- The concentration range is 6 to 12% and should be adjusted as necessary to maximize performance.

ADVANTAGES

- Easily forms a translucent micro-emulsion in all types of water
- Designed specifically for aluminum alloys
- Has lower consumption rate
- Bio-stable - provides long coolant sump life without unpleasant odor
- No additive top-treats necessary
- Contains no chlorine or sulfur
- Allows for cleaner machines and environment
- Greater operator acceptance
- Formula provides for rapid cooling of work piece and tool
- Will not stain aluminum
- Low foaming tendency, no tankside treatments of antifoam
- Rapid tramp oil rejection
- Consistent and reliable formulation
- Low misting tendency

TYPICAL CHARACTERISTICS	SPIRIT 3310 S
Appearance	Clear Amber Liquid
Odor	Very Low Odor
Specific gravity @ 15.6 / 15.6 (conc.)	0.96
Density @ 60 F, lbs/gal	7.958
Chlorine and sulfur content	Nil
pH @ 5 %	9.1
Emulsion stability @ 5%	Stable
Foam break @ 5%, mixer method, sec.	5
Cast iron chip rust break point, %	3
Refractive Index, Factor	1.32
Emulsion @ 5% fresh dilution	Translucent Amber Liquid

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TOTAL Lubricants USA, Inc.

Linden, NJ 07036

5 North Stiles Street
908.862.9300/800.526.4127

Rockingham, NC 28379

709 Airport Road
800.323.3198 / 800.526.4127

Knoxville, TN 37914

3315 Riverside Drive
800.323.3198 / 800.526.4127

Plano, TX 75075

400 Chilsholm Place Ste 418
800.323.3198 / 800.526.4127

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