

SPIRIT 600 S



METALWORKING



TOTAL

Moderate-Duty, Semi-Synthetic, Micro-Emulsion for Ferrous & Non-Ferrous Metals.

APPLICATIONS

- **SPIRIT 600 S** is a translucent, semi-synthetic coolant concentrate, which is easily diluted with water in all ratios. It represents the most up-to-date technology in the development of a bio-stable metalworking fluid. It accomplishes this without formaldehyde releasing biocides, secondary amines, or amines of questionable safety. **SPIRIT 600 S** is non-irritating to operators, as its chemistry uses materials from the cosmetics industry. It is multi-metal compatible, has high lubricity for aluminum and steel cutting, yet still has the best iron rust protection on the market at 2% CIC breakpoint. The surfactants are non-ionic which allows it to form a stable micro-emulsion with water of all qualities, from 0 to 700 ppm. It is very waste treatable by Acid Alum methods.
- **SPIRIT 600 S** is low foaming. This is achieved by creating a naturally non-foaming formula, as opposed to adding defoamers. Thus, the issue of defoamer depletion has been eliminated.
- **SPIRIT 600 S** is used on all cutting operations on all ferrous and non-ferrous metals. It will not stain aluminum or copper.

ADVANTAGES

- Bio-stable without formaldehyde release.
- Extreme pressure and anti-wear agents.
- Excellent lubricity properties--Increases the tool life on a large scale of cutting parameters maintaining an additive layer on the chip / workpiece / tool surface.
- Non-foaming, non-staining, non-flammable, non-irritating and non-toxic.
- Contains no sulfur, chlorine, nitrites, phenols, or diethanolamine.
- Permits operator surveillance of the workpiece at all times.
- Splits out tramp oil quickly.
- Settles metal fines rapidly and keeps grinding wheels clean.
- Excellent for recycling.

TYPICAL CHARACTERISTICS	SPIRIT 600 S
Appearance	Clear Yellow Liquid
Density @ 60 °F, lbs./gal.	8.60
Specific Gravity @ 60/60 °F	1.03
Flash Point, COC, °F	None
Copper Strip Corrosion	1A - 1B
Sulfur, %wt.	None
Chlorine, %wt.	None
pH @ 10%	9.3
Refractive Index Factor	1.486
Refractive Index @ 10%	6.5
Cast Iron Chip Rust Breakpoint	2%

Standard dilution of water to oil is 15:1. May be mixed satisfactorily from 10:1 to 20:1 depending on the type and severity of the operation. For grinding operations, 20 to 25 parts water to 1 part **SPIRIT 600 S** is recommended. The concentration should be adjusted as necessary to maximize performance.

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