

S-396® Coolant Concentrate: Emulsifiable Oil

FEATURES

- Superior Lubricity Package
- Low Residue
- Non-Hazardous
- Non-Irritating
- Rejects Tramp Oil
- Long Lasting: Bio-Stable
- High Pressure Capable with Low Foam
- Chlorine Free Extreme Pressure Technology

GENERAL DESCRIPTION

Hangsterfer's **S-396** is engineered to provide maximum lubricity while leaving minimum residue. Far superior results can be obtained utilizing **S-396** over conventional chlorine free and most chlorinated synthetic, semi-synthetic, and soluble oil technologies. In addition, the polar additives have been synthesized to perform at optimum polar intensity. **S-396** is especially good for machining Aluminum, allowing extreme increases in productivity with the added Iron protection. **S-396** is non-hazardous and non-irritation, containing no substances of very high concern. **S-396** is Boron, Formaldehyde, and Secondary Amine free.

APPLICATIONS

Primary		Secondary
Drilling	Thread Cutting	Drawing
Milling	Tread Forming	Forming
Reaming	Thread Milling	Stamping
Sawing	Turning	Punching

MATERIALS

Primary		Secondary
Aluminum	Ductile Iron	Chrome
Brass	Precious Metals	Plastic
Carbon Steel	Stainless Steel	Powdered Metals
Cast Iron	Steel	Titanium
Copper	Tool Steel	Zinc

INSTRUCTIONS

Initial Charge: Always pre-mix coolant before adding to the machine sump. For best results, a Hangsterfer's recommended proportioning unit should be used. When mixing coolant by hand it is important to add the concentrate to the water, and then agitate. Confirm coolant concentration with a calibrated refractometer. Charge the machine at the desired coolant concentration, and check the concentration regularly. **Maintenance:** After the initial charge, add make-up as needed to maintain the desired concentration. Avoid adding straight concentrate or water to the machine. Make-up should be added at one-half the desired concentration (i.e. Initial = 6%, Make-up = 3%). **Concentration In-Use:** For general cutting and grinding, use 3-10%; heavy duty applications may require, 10-20%.

MAINTENANCE

S-396 is a bio-stable coolant designed to control the growth of bacteria and fungus. Regular maintenance is required for maximum performance. Concentration should be monitored regularly with a calibrated refractometer. When adjustments in concentration are required, use quality, potable water. If treated water is required, use reverse osmosis (R/O). Avoid adding straight concentrate or water to the machine. In part, to fight bacterial growth, it is important to keep the coolant moving; additionally, tramp oil and metal debris should be removed from the coolant regularly. The coolant system should be kept free of

cleaners, solvents, and other contaminants. When a cleaner is required, Hangsterfer's recommends Res-X® Coolant Compatible Cleaner for cleaning in and around the machine. Hangsterfer's also offers a full line of machine lubricants for optimal coolant compatibility.

OPERATION	CONCENTRATION		
	%	Ratio Concentrate: Water	Refractometer
General Grinding	5	1:20	4.46
General Machining and Turning	7.5	1:13	6.7
Grinding with aggressive feed rates	10	1:10	8.9
Drilling, Tapping, Reaming	10	1:10	8.9

PRODUCT CHARACTERISTICS

Product Name: S-396		Concentration Dilution Table		
Form	Liquid			
Color	Golden			
Odor	Mild	%	Ratio Concentrate: Water	Refractometer
Specific Gravity	0.94 - 0.96	10	1:10	8.93
Viscosity: SUS @ 100°F	300 - 396	8	1:12	7.14
cSt @ 40°C	65 - 85	7.5	1:13	6.70
Flash Point, COC, °F/°C	>312/100	5	1:20	4.46
Solubility in Water	100%	4	1:25	3.57
Vapor Pressure, mm Hg @ 25°	<0.01	3	1:33	2.68
pH@ 10%	8.7 - 9.3	2.5	1:40	2.23
Chlorine	No	2	1:50	1.79
Sulfur	No	1	1:100	0.89

Refractive Index Multiplier = 1.12

WASTE TREATMENT

Dispose of in accordance with local, state, federal and international laws. If and when it is necessary to dispose of waste fluids, the amount of waste can be greatly reduced by separating the water from the oil and contaminants which accumulate through normal machining. You can often reduce your waste disposal by more than 80% through conventional methods such as Ultra-Filtration, Chemical Treatment, or Evaporation. After approval by your local, state, or federal authorities, the waste water may be sent to the sewer or discharged into waters, and the separated oils may be removed for recycling, sale or disposal.

SHIPPING UNITS

All Hangsterfer's products are available in pails, drums and Intermediate Bulk Containers (275 gallons). All products are distributed worldwide.

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