

## S-500® Coolant Concentrate: Water Soluble Oil

### GENERAL DESCRIPTION

- **Non-Toxic, Non-Irritating and Non-Corrosive.**
- Amine-free, Phosphate-free and Nitrite-free.
- **Bio-stable** formulation for extended life and minimized waste.
- **Compatible** with all common machine tool components, including paint and seals.
- **Reduce inventories;** multi-purpose formulation eliminates need for multiple coolants
- **Outstanding performance** on difficult to machine materials.
- **Ideal for** continuous use recycling systems and central systems.
- Contains **Extreme Pressure Additives** for severe applications.
- **Excellent rejection** of foreign contamination, including tramp oils.

### APPLICATIONS

Primary		Secondary	
CNC Turning	CNC Milling and Drilling	Broaching, Shaping & Slotting	Gear Cutting & Finishing
Tapping & Threading	Reaming & Boring	Drawing	Forming
Sawing & Cut-off	Light Stamping	Heavy Stamping	Fine Blanking
High Speed Machining	High Pressure Machining	Grinding, including:	
Conventional Contract Shop Applications		Centerless, Creepfeed, Surface, ID/OD and Rotary.	

### MATERIALS

Primary		Secondary	
Aluminum Alloys	Tungston & Titanium	Brass & Bronze	Copper & Copper Alloys
High Temperature Alloys	Powdered Metals	Ductile Iron & Cast Iron	Refractory Metals
Nickel Alloys	Plastics & Composites	Ceramics	Glass
Chromium Alloys	Molybdenum	Stainless Steels: Bhn 350-450	
Steels: Bhn 350 - 450	Precious Metals		
Stainless Steels: Bhn up to 350			

### INSTRUCTIONS

Pre-mixing Procedures:	Recommended Concentrations:			
<ul style="list-style-type: none"> <li>• <u>Always</u> premix coolant before adding to the machine sump.</li> <li>• <u>Never</u> add straight water or straight concentrate directly to the machine's sump.</li> <li>• For best results a Hangsterfer's recommended proportioning device should be used.</li> <li>• If mixing by hand, always add concentrate to water, and then agitate.</li> </ul>	Applications	Ratio <small>Concentrate: Water</small>	%	Refractometer
	General Cutting	1:20 - 1:10	5% - 10%	5 - 10
	Severe Cutting	1:10 - 1:5	10% - 20%	10 - 20
	General Grinding	1:40 - 1:20	2.5% - 5%	2.5 - 5
	General Deformation	1:40 - 1:10	2.5% - 10%	2.5 - 10
	Severe Deformation	1:10 - 1:5	10% - 20%	10 - 20

### Make-up Procedures:

<ul style="list-style-type: none"> <li>• It is important to remember that as water evaporates from the coolant, the concentration will increase.</li> <li>• To maintain the recommended concentration in the machine, make-up coolant should be pre-mixed at half the % concentration as the initial fill.</li> <li>• To maintain 6% in the machine, first charge the machine at 6%, then add make-up at 3% to keep the machine full. This will keep the machine at 6%.</li> <li>• Never add just straight water to reduce the concentration, always add a light pre-mixed coolant</li> </ul>	Recommended Maintenance Equipment:
	Hangsterfer's <b>Accumix 14100</b> is a premium piston-style proportioning device that insures proper proportioning and mixing of the water and concentrate. A tight, stable emulsion is the result.
	Hangsterfer's <b>Basic Refractometer</b> measures concentrations from 0% to 18% and is one of the most important tools a shop can have in regards to coolant maintenance.
	Hangsterfer's <b>Basic Belt Skimmer</b> removes tramp oil from the machine sump as it accumulates. Take advantage of the tramp oil rejecting properties of the coolant and maximize sump life.

## MAINTENANCE

S-500 is a biostable coolant, designed to control the growth of bacteria. Regular maintenance is required for maximum performance. Concentration should be monitored regularly with a calibrated refractometer. S-500 gives a direct read on the refractometer (e.g. 5=5%). Tramp oils should be removed from the coolant surface regularly to prevent unwanted bacterial growth. Keep the coolant system free of cleaners, solvents and other contaminants.

PRODUCT CHARACTERISTICS				
Product	S-500	Concentration Dilution Table		
Form	Liquid			
Color	Green			
Odor	Mild			
Specific Gravity	0.96	%	Ratio	Refractometer
<b>Viscosity: SUS @ 100°F</b>	<b>288</b>	20%	1:5	20
<b>cSt @ 40°C</b>	<b>62</b>	15%	1:7	15
Flash Point, COC, °F/°C	340 /170	10%	1:10	10
Fire Point, COC, °F/°C	345 /173	7.5%	1:13	7.5
Pour Point, °F/°C	<0 / -18	5%	1:20	5
Solubility in Water	100%	4%	1:25	4
Boiling Point, °F/°C	289 / 143	3%	1:33	3
Vapor Pressure, mm Hg @ 25°	<0.01	2.5%	1:40	2.5
pH @ 10%	9.1	2%	1:50	2
Chlorine	Added as EP Additive	1%	1:100	1

## SHIPPING UNITS

S-500 is available in 5 gallon, 55 gallon and Intermediate Bulk Containers (275 or 330 gallons). All products are distributed worldwide.

Revised: November 5, 2008

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