

## CRYSTAL CUT® 322 *Synthetic Coolant Concentrate*

### GENERAL DESCRIPTION

- Multi-Purpose Synthetic Coolant.
- Transparent.
- Biostable formula, Extended sump life.
- Excellent Corrosion Control on Steel and Iron.
- Ideal for continuous use Recycling Systems.
- Non-Toxic and Non-Corrosive.
- Boeing Approved.
- Chlorine Free, Sulfur Free, Nitrite Free.

### APPLICATION

Hangsterfer's Crystal Cut 322 is a full synthetic coolant. It is used successfully in all types of grinding applications including surface, centerless, cylindrical, creep feed, rotary surface, form, tool and cutter grinding. Crystal Cut 322 is also used for CNC machining and CNC turning. Crystal Cut 322 should be used between 5% and 15%. As the hardness of the material increases, the concentration should also increase

<i>Materials</i>			
Cast Iron	Carbide	High Speed Steel	
Ductile Iron	Nickel Alloys	Tool Steel	
Glass and Ceramics	Stainless Steel	Titanium	
<i>Operation</i>		<i>Concentration</i>	
	<i>Ratio*</i>	<i>%</i>	<i>Refractometer</i>
General Grinding	1:20	5	1.7
General Machining and Turning	1:13	7.5	2.5
Grinding with aggressive feed rates	1:10	10	3.3
Drilling, Tapping, Reaming	1:10	10	3.3
Light Stamping and Forming	1:10	10	3.3

\*Concentrate: Water

### MIXING INSTRUCTIONS

Always premix coolant before adding to the machine sump. When mixing coolant by hand it is important to always add the concentrate to the water, then agitate. For best results a Hangsterfer's recommended proportioning unit should be used. To maintain recommended concentration, make-up or top-up should be added at one-half the desired concentration. To maintain 6% in the machine, first charge the machine at 6%, then as needed add make-up at 3%. Never add straight water or concentrate directly to machine.

### MAINTENANCE

Crystal Cut 322 is a biostable synthetic coolant, designed to control the growth of bacteria. Regular maintenance is required for maximum performance. Concentration should be monitored regularly with a calibrated refractometer. 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.

<b>PRODUCT CHARACTERISTICS</b>				
Product	CC 322	%	Ratio	Refractometer
Form	Liquid	20%	1 : 5	6.67
Color	Amber	15%	1 : 7	5
Odor	Mild	10%	1 : 10	3.33
Specific Gravity	1.04	7.5%	1 : 13	2.5
Viscosity: SUS @ 100°F	50	5%	1 : 20	1.67
cSt @ 40°C	8	4%	1 : 25	1.33
Flash Point, COC, °F/°C	Non Flammable	3%	1 : 33	1
Fire Point, COC, °F/°C	Non Flammable	2.5%	1 : 40	0.83
Pour Point, °F/°C	32 / 5	2%	1 : 50	0.67
Solubility in Water	100%	1%	1 : 100	0.33
Boiling Point, °F/°C	212 / 100	<b>TOXICOLOGY</b>		
Vapor Pressure, mm Hg @ 25°	Not Applicable	Crystal Cut 322 is FREE of ZINC PCB'S VOC'S BORON NITRITE NITRATE DIETHANOLAMINE (DEA) OZONE DEPLETING CHEMICALS		
pH @ 10%	8.5			
<b>Sulfur, Active</b>	0%			
Chlorine	0%			
Phosphorus	0%			
Solvent Content	0%			
Solids Content	0%			
Silicone	0%			

### **WASTE TREATMENT**

All Hangsterfer's synthetic concentrates are designed for easy waste treatment. By separating the water phase from the synthetic fraction and various contaminants, which accumulate through normal machining, you can reduce your waste disposal by 80%-90%. Hangsterfer's recommends Ultra Filtration or Chemical Treatment for removal of fats, oils, greases and heavy metals prior to disposal of the water phase. Following approval by your local authorities, your wastewater stream may be sewerred and waste oils removed for recycling or disposal.

### **SHIPPING UNITS**

All Hangsterfer's products are available in 5 gallon, 55 gallon and Intermediate Bulk Containers (260 or 330 gallons). All products are distributed worldwide.

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The general description, recommended uses, application data and statements in the product literature are guidelines. Because this product may be used for a variety of applications over which Hangsterfer's Laboratories, Inc. has no control, Hangsterfer's Laboratories, Inc. assumes no liability for incidental, consequential, or direct damages of any kind, regardless of causes, including negligence.

