

## Cobalt Grinder® *Synthetic Coolant Concentrate*

### GENERAL DESCRIPTION

- No Cobalt Leaching
- Excellent filterability
- Non Foaming
- Excellent cleanability
- Dye free
- Low odor
- Mild to operators
- Low pH at in-use dilution

Hangsterfer's Cobalt Grinder is a pure synthetic coolant designed for the grinding of carbide. Cobalt leaching is a concern when grinding carbide materials with water based coolants, and the Cobalt Grinder addresses these issues. Designed with the ability to inhibit cobalt leaching, this product allows for the use of water when grinding carbide materials. Filterability is excellent as is work piece visibility. The Cobalt grinder may be cleaned with any aqueous or solvent-based parts cleaning system.

### MATERIALS

Primary		Secondary	
Aluminum Alloys	Low Carbon Steel	Bass & Bronze	Precious Metals
Nickel Alloys	Powdered Metals	Copper Alloys	Plastics & Composites
Stainless Steel	Tool Steel & High Speed Steel	Ductile Iron	Refractory Metals
Carbide	Titanium & Ceramics	Cast Iron	Glass
	High Carbon Steel		

Application	Concentration		
	Ratio Concentrate: Water	%	Refractometer Reading
General Grinding	1:20	5%	1.11

### APPLICATION

Primary	Secondary
Grinding of carbide-based materials where water based synthetic coolant is preferred.  Surface, Edge, ID, OD, * We have a full line of specialty oils designed for grinding carbide also*	May be used as a general-purpose synthetic grinding coolant if needed.  Surface, ID-OD, etc.

### 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 and then agitate. For best results a Hangsterfer's recommended proportioning unit should be used. To maintain recommended concentration, make-up should be added at one-half the desired concentration. To maintain 5%: first charge the machine at 5%, then as needed add make-up at 2.5%. Never add straight water or concentrate directly to machine.

## WASTE TREATMENT

All Hangsterfer's soluble oils are designed for easy waste treatment. By separating the water phase from the oil 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.

## MAINTENANCE

Cobalt Grinder 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. The refractometer reading needs to be multiplied by 4.5 in order to determine the actual concentration (e.g. 1 on refrac. =4.5 %). 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. Please note that the Cobalt Grinder will run clear at design levels of 5%. If it drops below design levels, it will start to turn pink, indicating the presence of cobalt in the solution. Always maintain correct concentrations.

PRODUCT CHARACTERISTICS				
Product	Cobalt Grinder	Concentration Dilution Table		
Form	Liquid			
Color	Golden			
Odor	Mild			
Specific Gravity	1.04	%	Ratio	Refractometer
Viscosity: SUS @ 100°F	14.1	5	20:1	1.10
cSt @ 40°C	3.1	10	10:1	2.20
Flash Point, COC, °F/°C	Not Flammable			
Fire Point, COC, °F/°C	Not Applicable			
Pour Point, °F/°C	NA			
Solubility in Water	100%			
Boiling Point, °F/°C	199/93			
Vapor Pressure, mm Hg @ 25°	12.20 psi			
pH @ 5%	9.5			
Chlorine	0	Refractive Index Multiplier = 4.5		

## SHIPPING UNITS

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

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