

Crystal Cut 777® *Vegetable Based Micro Emulsion*

GENERAL DESCRIPTION

- Extended Sump Life
- Excellent Machinability
- Excellent Cleanliness
- Hydrocarbon Free
- High Pressure Capable to 2,000 psi
- Chlorine Free Extreme Pressure Technology
- Excellent Corrosion Control
- Very Low Consumption

Crystal Cut 777 is the very latest in vegetable based technologies from Hangsterfer's laboratories. The hydrocarbon free formula utilizes special ingredients to achieve outstanding results in a wide variety of applications. The unique lubricity characteristics of Crystal Cut 777 allow for tapping and machining of steel and aerospace materials. Crystal Cut 777 is a chlorine free vegetable based micro emulsion that provides excellent cleanliness, clarity, and low tramp oil absorption. The unique micro emulsion formula provides outstanding performance that rivals petroleum oil containing competitive products.

APPLICATIONS

| Primary | | Secondary |
|-----------------------------------|------------------|--------------------|
| CNC Turning, Milling and Drilling | ID/OD Grinding | Light Stamping |
| Tapping & Threading | Reaming & Boring | Sawing |
| High Pressure Coolant Machining | Surface Grinding | Blanchard Grinding |
| High Speed Machining | | |

MATERIALS

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

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-fourth the desired concentration. Always check concentration with a refractometer. To maintain 6%: first charge the machine at 6%, then as needed add make-up as much as 1.5%. Avoid adding straight water or concentrate directly to machine.

MAINTENANCE

Crystal Cut 777 is a bioresistant emulsion 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 2.5 in order to determine the actual concentration (e.g. 3 on a refractometer = 7.5%). 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.

WASTE TREATMENT

All Hangsterfer's vegetable based emulsions 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.

| PRODUCT CHARACTERISTICS | | | | |
|-------------------------|-----------------|-----------------------------------|-------|---------------|
| Product | Crystal Cut 777 | Concentration Dilution Table | | |
| Form | Liquid | Refractive Index Multiplier = 2.5 | | |
| Color | Amber | % | Ratio | Refractometer |
| Odor | Mild | 20% | 1:5 | 8 |
| Specific Gravity | 1.02 | 15% | 1:7 | 6 |
| Viscosity: SUS @ 100°F | 69 | 10% | 1:10 | 4 |
| cSt @ 40°C | 13 | 7.5% | 1:13 | 3 |
| Flash Point, COC, °F/°C | Non Flammable | 5% | 1:20 | 2 |
| Fire Point, COC, °F/°C | Non Flammable | | | |
| Pour Point, °F/°C | 32/0 | | | |
| Solubility in Water | 100% | | | |
| Boiling Point, °F/°C | 212/100 | | | |
| pH @ 10% | 9.1 | | | |

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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