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TECHNICAL DATA SHEET

HB-1220

HEAVY DUTY SOLUBLE COOLANT

DESCRIPTION:

- Designed for superior performance in metalworking operations, aqueous hydraulic/heat transfer systems and other uses requiring a water emulsifying oil of high stability and quality.
- Blend of highly refined petroleum oils, highly stable emulsifiers, rust/corrosion inhibitors and lubricity agents.
- Specially selected to produce a fluid which readily emulsifies in hard water; resists foaming and bacterial growth; and prevents rusting/corrosion of ferrous and non-ferrous metals.

PERFORMANCE CHARACTERISTICS:

- HD Soluble Oil
- Easily combines with even hard water to form a highly stable emulsion that provides excellent cooling of machining and grinding operations
- Protects work pieces and machines from rusting and corrosion.
- Using this product avoids the smoking and fumes that commonly occur with oil-type cutting oils.
- Does not cause dermatological problems for machine operators.
- It does not soften or lift paint on the machine tools.
- Will produce better surface finishes at higher cutting/grinding speeds and with less tool wear and wheel loading.
- Bacterial control agents increase the "service life" of this coolant by suppressing the bacteria which contribute to rancidity and odor problems in aqueous emulsions.
- In hydraulic and heat transfer systems; provides excellent rust / corrosion protection for any metals within the storage/circulation systems that are "wet" by the fluid. Fiber-type seals and gaskets are kept pliable and synthetic rubber seals kept lubricated for reduced wear and leakage.

USES:

Recommended for:

- All general to heavy-duty cutting and grinding operations for which aqueous coolants are suitable.
- Hydraulic systems designed for oil-in-water emulsions.
- Heat transfer systems where water emulsions are suitable.
- Rust prevention in water reservoir/storage systems (unless the presence of oil is objectionable).
- Rust prevention of ferrous metals.
- Check with product manufacturer's Technical Representative for specific applications.

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APPLICATIONS:

Some typical metal working operations using water soluble oils are:

Grinding	Reaming
Turning	Sawing
Drilling	Milling
Boring	Threading

Specific recommendations for dilution ratios are not feasible due to the wide variations in materials, tool and machining operations. However, some general "guidelines" are as follows:

1. Free machining materials: Oil/water ratios of 1:25 to 1:50
2. Tough or "draggy" materials: Oil/water ratios of 1:10 to 1:30
3. Grinding: Oil/water ratios of 1:40 to 1:100

TYPICAL SPECIFICATIONS:

Specific Gravity API	24.5
Viscosity SUS @ 100°F	180
Flash °F	340
Pour °F	-15
Rust Test	Pass
Corrosion Test	Pass
Copper Strip Teas	1