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TECHNICAL DATA SHEET

HB-1225

EXTREME PRESSURE WATER SOLUBLE COOLANT

DESCRIPTION:

- Designed for service in metal working operations and aqueous hydraulic/heat transfer operations where extra heavy duty performance is needed.
- Superior stability and rust prevention performance are features that are necessary for other applications requiring a water emulsifying oil. The extreme pressure performance in heavy duty metal working is excellent and is highly beneficial to that type of operation.
- Is a blend of highly refined petroleum oils, stable emulsifiers, superior rust/ corrosion inhibitors, lubricity and EP 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:

- Mixes easily with hard water to form a highly stable emulsifier that provides excellent cooling of machining and grinding operations, while protecting work pieces and machines from rusting and corrosion.
- Does not soften or lift paint on the machine tools, and avoids the smoking and fumes that commonly occur with oil-type cutting oils.
- Does not cause dermatological problems for machine operators.
- Produces better surface finishes at higher cutting/grinding speeds and with less tool wear and wheel loading.
- The EP agents permit machining operations at higher feeds and speeds without the penalty of higher tool costs and loss of surface finish quality. This means less cost per work piece, higher production rates and fewer surface finish rejections.
- 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:

1. All extra heavy-duty machining operations for which aqueous coolants are suitable, particularly where the metal working operations will benefit from the EP performance of this fluid.
2. Hydraulic systems designed for oil-in-water emulsions, will minimize any wear points in the system.
3. Heat transfer systems where water emulsions are suitable.
4. Rust prevention in water reservoir/storage systems (unless the presence of oil is objectionable).
5. Rust prevention of ferrous metals.

APPLICATIONS:

Some typical metal working operations using water soluble oils are:

Broaching	Reaming
Grinding	Sawing
Turning	Milling
Drilling	Threading
Boring	

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. Broaching, deep drilling, etc. on free machinery materials: Oil/water ratios of 1:25 to 1:50
2. Tougher cuts on "draggy" materials: Oil/water ratios of 1:15 to 1:40
3. Grinding, extra heavy: 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
E.P, Additive	Non-Corrosive