

MOLYGULF SPECIALIZED LUBRICANTS

Ultimate High Performance Specialty Lubricants



SG-45 HEAVY DUTY WATER SOLUBLE CUTTING COOLANT



SG-45 Possesses Excellent Cooling, Extreme Pressure, and lubricity properties that are needed for High Speed Machining Operations. It contains Surface-Active ingredients in the form of Polyalkene Glycol Synthetic Base Fluids, which enables the fluid to wet the metal surfaces of the tool and the work piece in order to provide a protective film for lubricating the tool and the work piece interface through a unique physical characteristic called Inverse Solubility.

APPLICATION:

SG-45 is a concentrated water-soluble Polyalkene Glycol Base Synthetic, Non-staining metalworking fluid that is recommended for use in grinding and other high speed light to heavy duty machining operations on both ferrous and non-ferrous metals. It does not contain any sulfur, chlorine, nitrites, phenols, or heavy metals. It is formulated to provide maximum lubricity to ferrous and non-ferrous materials without the use of additives that can cause staining to copper, brass, bronze, aluminum, and other non-ferrous metals.

FEATURES:

1. Excellent cooling and lubricity.
2. Excellent extreme pressure protection.
3. Ability to machine at high speed and feed rates.
4. Improved surface finishes. Extended tool/wheel life.
5. Resistance to formation of gummy residue.

It contains an effective low-foaming emulsifier system that allows it to be mixed with water at varying concentrations. This emulsifier system allows the oil portion to be evenly and uniformly dispersed throughout the coolant mixture. This even and uniform dispersion results in a transparent emulsion that allows the operator the ability to see the work piece being machined. Further, by being evenly and uniformly dispersed, the smoking and misting characteristics that are associated with the use of soluble cutting fluids is virtually eliminated. This emulsifier system also provides a detergent action that allows the Heavy Duty Water Soluble Cutting Coolant the ability to break up and dislodge dirt and grit in order to keep the machine and tools clean. This detergent action also

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assists in flushing of the chips and fines away from the cutting area.

TYPICAL SPECIFICATIONS:

pH Value (neat)	9 to 9.5
Falex Pin & Vee Block Test ASTM D-3233 Method B 20:1 dilution	2041kg-f (4,500 lb)
Four Ball E.P. Test ASTM D-2783 Weld Point, kg 20:1 dilution	250
Tapping Torque Test (1215 Steel) ASTM 5619 20:1 dilution - % Efficiency	100%
Cast Iron Chip Test 20:1 dilution 50:1 dilution	Pass – No rust Pass – No rust
Waring Blender Foam Test 200ml of 20:1 dilution agitated for 1 minute.	Low Foaming

RECOMMENDED APPLICATION DILUTION RATES:

APPLICATION:	RATIO OF SYNKOOL SS TO WATER
Automatic turret and engine lathe	1:20 (5% dilution)
Drilling, Milling ,and Turning	1:20 (5% dilution)
Reaming, Boring, and Sawing	1:20 (5% dilution)
Gearhobbing, Hobbing, Shaping, Broaching	1:20 (5% dilution)
Tapping, Threading and Counterbroaching	1:20 (5% dilution)
Grinding	1:30 (3% dilution)