

# **METALWORKING**

DATAFILE

# MAXIM SYNTHETIC 233 Metalworking Fluid for Cutting and Grinding

**MAXIM SYNTHETIC 233** concentrate is a water extendable, oil rejecting, polyalkylene glycol based synthetic cutting, sawing and grinding fluid formulated to perform exceptionally in a variety of machine operations.

MAXIM SYNTHETIC 233, when diluted with water; exhibits excellent cooling properties for superior finishes and increased tool life. 233 is recommended for use when sawing and grinding ferrous metals and cutting applications where machinability requirements range from mild to moderately severe.

MAXIM SYNTHETIC 233 remains highly transparent to afford the machine operator full view of the work. Unlike many synthetics, the 233 remains fluid in and on the surfaces of the machining center allowing slideways, chucks, and tooling to work freely without a hard-to-clean, dry residue. The translucent dilute is non-foaming, silicon free, and retains its oil rejecting characteristics in both soft and hard water. These and related traits compel the 238 to be an excellent choice in systems where undiminishing filterability and rapid tramp oil separation is a contingency for favorable fluid recovery.

The effective biostatic system formulated into the 233 yields a higher resistance to microbial degradation and rancidity than conventional fluids; this allows for longer coolant life in machine sumps and central coolant systems without special maintenance procedures. 233 contains no DCHA, formaldehyde, chlorine, nitrite, phenol.

#### Recommended Starting Dilutions

Grinding/Sawing - centerless, surface, cylindrical, internal, bandsaw 1:33 (3%) to 1:14 (7%)

Machining - drilling, turning, milling, tapping, boring, and reaming 1:25 (4%) to 1:10 (10%)

Concentration	1:33 (3%)	1:25 (4%)	1:20 (5%)	1:17 (6%)	1:14 (7%)	1:12 (8%)	1:11 (9%)	1:10 (10%)
Refractometer Reading	1.0	1.4	1.8	2.2	2.5	2.8	3.2	3.6
(ApproxBrix Scale)								

## MAXIM SYNTHETIC 233 Performance Advantages

- Unique Wheel / Tool Performance Excellent cooling and extreme pressure properties combine to provide extended tool life.
- + Excellent Cleanliness Remains transparent; good settling properties provide contaminant removal; low foaming; No hard to remove residue on
- + Exceptional Corrosion Control Prevents in-process corrosion of work pieces machine tool parts.
- + Long Life More tolerant of hard water and tramp oils and has a high resistance to rancidity.

### **Typical Physical Characteristics**

Specific Gravity, 60F

Flash Point, per COC F

pH, fresh,1:20 (5%) dilution

Color, concentrate

1.05

none

9.8

blue / green/ red/ available undyed

#### Packaging

MAXIM SYNTHETIC 233 is available in 55 gallon steel drums, totes and bulk quantities.

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