

METATRON™ 553

DESCRIPTION AND APPLICATIONS:

Metatron™ 553 is a heavy duty general purpose, transparent colored, non-staining, straight cutting oil that is recommended for use in machining applications where brass, bronze, all types of copper, cast type aluminum and high alloy, stainless and mild steels are being machined.

Composition and Performance Advantages:

Metatron™ 553 is formulated from the finest quality severely hydrotreated naphthenic base oils available. These severely hydrotreated naphthenic base oils, unlike other naphthenic base oils do not pose any cancer or other health hazard risks. Blended into these naphthenic base oils is a highly specialized additive package that is known as passive extreme pressure additive chemistry. These passive extreme Pressure agents are considered to be environmentally safe since they do not contain chlorine, chlorinated compounds, nitrites, phenols, heavy metals and other compounds That Have Been Found objectionable by the United States Environmental Protection Agency, The United States Occupational Safety and Health Administration and the UAW's Metalworking Product Stewardship Group.

This passive extreme pressure additive chemistry consists of materials that form an absorbed boundary lubricant film on the tool and the workpiece interface during the cutting operation. Once absorbed these passive extreme pressure agents provide the **Metatron™ 553** with the following performance advantages:

1. Excellent Extreme Pressure and Anti-weld Properties.
2. Excellent Rust Inhibition.
3. Non-Corrosive. Corrosion and Discoloration of the Metals Being Machined is Eliminated. Corrosion and discoloration of copper, nickel, silver, phosphor-bronze, copper-beryllium and other non-ferrous metals is eliminated.
4. Excellent Stability.
5. Increased Speeds and Feeds. The passive extreme pressure agents used in **Metatron™ 553** absorb onto the metal surfaces rather than reacting with them. This results in the formation of a barrier film that allows more pressure to be applied to the workpiece, since friction is greatly reduced. This results in more parts being produced.
6. Improved Surface Finish. This result in less surface distress, welding and plowing of the metal surface being machined.
7. Protection Against Intergranular Corrosion.
8. Longer Tool Life.

Resistance to Misting and Sling-Off

Also blended into the **Metatron™ 553** is an adhesive-cohesive additive. This adhesive-cohesive additive assures that the **Metatron™ 553** will not sling off and mist during high speed cutting operations.

TYPICAL PROPERTIES

Specific Gravity @ 15°C	0.8984
Viscosity @ 40°C, cSt ASTM D-445	29.03
Viscosity @ 100°C, cSt ASTM D-445	5.20
Flash Point °C (°F) ASTM D-92	171° (340°)
Fire Point °C (°F) ASTM D-92	193° (380°)
Rust Test ASTM D-665	
Procedure A (Distilled Water)	Pass
Procedure B (Salt Water)	Pass
Copper Strip Corrosion Test (ASTM D-130)	1a
Falex EP Continuous Load ASTM D-3233	
Failure Load, pounds	3,500
Total % Sulfur (inactive)	1%
Active Sulfur	None