Mobil

# Mobilcut Series

Mobil Industrial , Argentina

Aqueous Metal Working Fluids

## Product Description

Mobilcut is the trademark for Mobil Industrial lubricants line of high performance water miscible metal removal fluids. Formulated with leading edge base oils, additives, and emulsifiers, the Mobilcut series of non-chlorinated products provides dependable performance in a wide array of metal removal processes. The products are designed to work in a variety of hard and soft water qualities and offer low foam potential and long-term corrosion protection for machine and components. Low maintenance and inherently stable, Mobilcut products are designed for the modern machine shop where long service life, excellent machining performance and health and environmental concerns are important factors for increased productivity. These products are supplied in concentrated form and require mixing with water at the point of use.

Mobilcut 100 is a conventional milky soluble oil that readily mixes with different waters to form stable emulsions. Its versatile performance makes it suitable for a wide range of metal cutting and grinding operations for both ferrous and non ferrous materials where economical performance is the main consideration. It offers excellent emulsion stability and long-term corrosion protection for both components and machine tool.

Enhanced with lubricity agents, Mobilcut 140 is a long life water soluble fluid making it an ideal choice for moderate to heavy duty machining applications in the modern machine shop. It is formulated to provide long service life and good emulsion stability and durability while helping to increase tool life and surface finish, even in difficult machining operations. Mobilcut 140 is an ideal choice where excellent machining performance is required for a wide variety of materials and applications while being easy to monitor and maintain.

Mobilcut 250 is a high performance semi-synthetic fluid formulated to enhance performance when machining aluminum and aluminum alloys and where low staining potential is important on sensitive components. Containing high levels of lubricity agents, it provides high machining performance of carbon and alloy steels and yellow metals.

Mobilcut 320 is a bio stable mineral oil synthetic cutting fluid which provides excellent residual corrosion protection, non-sticky residues and excellent separability from Mobil Vactra Oil Numbered series. It is designed for general grinding operations where a high quality surface finish, outstanding cooling and low foaming potential are the primary requirements. It will help maintain free and open grinding wheels for maximum performance and shows a marked stability for long service life.

Mobilcut 350 is a high performance, bio stable, synthetic (mineral oil free) fluid with outstanding tramp oil rejection and low foam properties.

## Features and Benefits

The Mobilcut series of products are designed to help increase the productivity of modern machine shops by providing high performance features

| Features | Advantages and Potential Benefits |
|---|---|
| Form stable emulsions and solutions | Ease of use and maintenance |
| Long term inherent stability | Increases batch life and reduces unpleasant odors |
| Low foaming potential | Improved performance even in high pressure systems |
| Resists formation of sticky residues | Improves machine cleanliness |
| High degree of corrosion protection | Reduces machine maintenance and rework of materials |
| Good separability from fines | Improves filterability and surface finish |

| Features | Advantages and Potential Benefits |
|---|---|
| Wide Range of applicability | Potential to consolidate products and reduce inventories |
| Compatible with high performance Mobil Vactra Oil No slideway lubricants | Easy separation and removal of tramp oil |
| Neutral Odor | Enhances the workplace environment |

## Applications

Mobilcut 100: General machining of easy to machine steels and copper alloys in light to moderate duty machining operations such as milling, turning, sawing, boring, drilling and reaming.

Mobilcut 140: Machining of aluminum and high machinability steels in o moderate to heavy duty operations such as milling, turning, sawing, boring, drilling and reaming where the lubricity of a soluble oil is desired.

Mobilcut 250: Semi synthetic cutting fluid primarily intended for the machining of aluminum and aluminum alloys. It may also be used on a wide variety of ferrous materials where a more versatile fluid is required.

Mobilcut 320: Synthetic (mineral oil-free) fluid for grinding of steels and cast iron. Not suitable for Tungsten Carbide (Cobalt leaching).

Mobilcut 350: Synthetic (mineral oil-free) fluid for general cutting and grinding operations of ferrous materials from light to severe duty, designed for modern machining equipment and high surface finish.

## Properties and Specifications

| Property | 100 | 140 | 250 | 320 |
|---|---|---|---|---|
| Appearance, PTM 100 | | Amber Liquid | Dark Amber Liquid | Dark Green Liquid |
| Appearance, Visual | Slight Haze | | | |
| Cast Iron Corrosion, %BRKPT, PTM 108 | | 3 | 3 | 2.5 |
| Emulsion Type @ 3% in 50 ppm water, Rating, PTM 141 | | | Semi-synthetic | Synthetic |
| Emulsion, Appearance, AMS 500.35-PROA | Milky White | | | |
| Kinematic Viscosity @ 40 C, mm2/s, ASTM D445 | 32 | | | |
| Kinematic Viscosity at 40 C, cSt, PTM 143 | | 59 | | |
| Pour Point, °C, ASTM D97 | -10 | -42 | | |
| Specific Gravity at 20 C, PTM 103 | | 0.945 | 0.945 | |
| Specific Gravity, 15.6 C/15.6 C, ASTM D4052 | 0.881 | | | |
| pH at 3% in Distilled Water, PTM 104 | | | | 9.4 |
| pH at 5% in Distilled Water, PTM 104 | | 9 | | |
| pH, Emulsion, 10% in Distilled Water, ASTM E70 | 10 | | | |

## Health and Safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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Typical Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit www.exxonmobil.com

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