Mobil

Mobilcut Series

Mobil Industrial , New Zealand

Aqueous Metal Working Fluids

Product Description

Mobilcut is the trademark for ExxonMobil's 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 that readily mixes with water 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.

Mobilcut 140 is a long life water soluble fluid enhanced with lubricity agents making it an ideal choice for moderate to heavy duty machining applications. It is formulated to provide long service life and resist bacterial growth 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 maintaining long service life.

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. Containing high levels of lubricity agents, it also provides high machining performance of carbon and alloy steels and yellow metals.

Mobilcut 320 is a bio stable, mineral oil free metalworking fluid. Mobilcut 320 is designed for general grinding operations where high surface finish, cooling and low foaming potential are the primary requirements. It will help maintain free and open grinding wheels for maximum performance and is highly resistant to bacterial infection for a long service life.

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
Resistant to biological growth	Helps increase batch life and reduces unpleasant odors
High degree of corrosion protection	Helps reduce machine maintenance and rework of materials
Good separability from fines	Helps improve filterability and surface finish
Wide Range of applicability	Potential to consolidate products and reduce inventories

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 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) grinding fluid, primarily recommended for grinding of steels and cast iron.

Properties and Specifications

Property	100	140	231	250	251	320
Grade	No ISO Grade	No ISO Grade	No ISO Grade	No ISO Grade	No ISO Grade	No ISO Grade
Anti-corrosion properties (emulsion) (5% in 360 ppm hardness water), -, DIN 51360-2			0/1		1/1	
Appearance, PTM 100		Amber Liquid		Amber Liquid		Orange /Amber Liquid
Appearance, Visual	Amber Liquid					
Appearance (concentrate), -, AA.Lab.101			Yellow Clear Liquid		brown, slightly turbid, liquid	
Density 15 C (concentrate), kg/m3, DIN 51757					988	
Density at 15 C, kg/m3, ISO 3675			986			
Emulsion stability (5% in 360 ppm hardness water), -, AA.Lab.102			translucent emulsion, no seperation		milky, no cream, no oil	
Emulsion, Appearance, AMS 500.35-PROA	Milky					
Foaming behavior (5% in 360 ppm hardness water), sec/ml, AA.Lab.103			30/0		6.6/0	
Kinematic viscosity 20 C (concentrate), mm2/s, DIN EN ISO 3104			93		123.5	
Refractive Index 20 C (concentrate), -, ASTM D1218					1.464	
Refractive index factor (5% in 360 ppm hardness water), AA.Lab.105			1.2		1.1	
Rust Prevention, Break, vol %, IP 287	3%					
pH (emulsion) (5% in 360 ppm hardness water), -, DIN 51369			9.2		9	
pH at 5% in Distilled Water, PTM 104		8.8				
pH, Emulsion, 10% in Distilled Water, ASTM E70	9.0-10.0					

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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