



## Mobilcut Series

Mobil Industrial , Indonesia

Aqueous Metal Working Fluid

### 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 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 water miscible cutting fluid with excellent solubility. Its highly stable and bio-resistant formulation developed for use as a multi-purpose, cost effective metal working fluid. It can be used on all types of work piece material for general turning, milling, drilling, tapping, grinding and reaming applications with low to medium tensile steel, cast iron, aluminum and their alloys.

Mobilcut 140 is a high performance long life water soluble metalworking fluid. It produces a very stable emulsion when diluted with water. It provides excellent corrosion inhibition performance even in extreme hard water conditions. It is specially designed for machining operations on aluminum alloys. It is also suitable for all ferrous and non-ferrous alloys for moderate to heavy turning, milling, drilling, tapping and reaming applications.

Mobilcut 220 is a long life semi-synthetic water soluble metalworking fluid, suitable for all moderate to heavy machining and grinding operations on all ferrous and its alloys. It forms a translucent micro-emulsion and has a unique formula with high performance extreme pressure additives, corrosion inhibitor packages and biocides which prevent bacterial & fungal attack and provides long life. It works very well in multi-purpose machining and specially grinding of cast Iron, grey iron, steel and its alloys where conventional soluble oil may not deliver adequate performance.

Mobilcut 250 is a high performance versatile semi synthetic water soluble metalworking fluid. It is designed for a broad range of metals for use in cutting and grinding operations. It forms a fine milky emulsion. The unique additive package of this product makes it a first choice for precision machining and consistent high quality manufacturing. It can be used on aluminum alloys, Steel alloys and other metals for grinding, turning, drilling, milling, tapping and reaming operations.

Mobilcut 231 is a high performance semi-synthetic water soluble metalworking fluid, suitable for all moderate to heavy machining and grinding operations on all ferrous and its alloys. It forms a light blue translucent micro-emulsion and has a unique formula with high performance extreme pressure additives, corrosion inhibitor packages and biocides which prevent bacterial & fungal attack and provides long life. It works very well in individual and central sumps delivering increased sump life and reducing overall operating cost.

Mobilcut 251 is a high performance versatile semi synthetic water soluble metalworking fluid for all types of materials such as aluminium, mild steel, stainless steel, cast iron and yellow metals. It forms a light blue fine milky emulsion. It is also recommended for difficult to machine materials such as Aluminium(Silicon content <6% & >10%) and 6000/7000 series Aluminium. It forms a fine bluish emulsion. The unique additive package of this product makes it a first choice for precision machining and consistent high quality manufacturing.It works very well in individual and central sumps delivering increased sump life and reducing overall operating cost.

### 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

Features	Advantages and Potential Benefits
Resistant to biological growth	Helps increase sump life and reduces unpleasant odor
Low foaming potential	Helps improve performance even in high pressure systems
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: Multi-purpose milky soluble metalworking fluid suitable for turning, milling, drilling, tapping, sawing, grinding and reaming applications with light to moderate machining of mild steel, cast iron, aluminum and their alloys.

Mobilcut 140: Long life milky soluble metalworking fluid, suitable for all moderate to heavy turning, milling, drilling, tapping, sawing, grinding and reaming applications with medium to heavy machining of mild steel, cast iron, aluminum and their alloys.

Mobilcut 220: High performance translucent semi synthetic metalworking fluid, suitable for grinding and moderate to heavy turning, milling, drilling, tapping, and reaming applications of cast Iron, steel and its alloys

Mobilcut 250: High performance milky semi synthetic metalworking fluid, suitable for moderate to heavy, turning, milling, drilling, tapping, and reaming applications of aluminum and steel alloys.

Mobilcut 231: Superior performance semi-synthetic water-soluble metalworking fluid, suitable for all grinding and moderate to heavy turning, milling, drilling, tapping, and reaming applications on all ferrous and its alloys. It works very well in individual and central sumps delivering increased sump life, minimal top-up and reduced Total Cost of Ownership(TCO). It has excellent wetting properties reducing coolant drag out delivering clean machine tools and components. Ideal for emulsion hardness up to 700ppm

Mobilcut 251: Superior performance versatile semi synthetic water soluble metalworking fluid suitable for moderate to heavy, turning, milling, drilling, tapping, reaming and grinding applications of aluminum and steel alloys. The unique additive package of this product makes it a first choice for precision machining and consistent high quality manufacturing. It works very well in individual and central sumps delivering increased sump life, minimal top-up and reduced Total Cost of Ownership(TCO). It has excellent wetting properties reducing coolant drag out delivering clean machine tools and components. Ideal for emulsion hardness up to 700ppm.

### Properties and Specifications

Property	100	140	220	231	250	251
Appearance (concentrate), -, Visual	Clear Brown Liquid	Clear Brown Liquid	Clear pale yellow liquid	Clear Blue Liquid	Clear pale yellow to Brown liquid	Clear Blue Liquid
Corrosion Break Point, % Brkpt, DIN 51360	6					
Corrosion Break Point, %, IP 287		5	3	2	3.5	2
Density @ 29.5 Deg C, g/cm <sup>3</sup> , ASTM 1298	0.9					
Density @ 29.5 deg C, g/ml, ASTM D4052		0.91	0.997	1.01	1	1.037

Property	100	140	220	231	250	251
Hard water Emulsion stability 5% in 400 ppm, Report, IHTP-012		Pass	Pass		Pass	
Hard water Emulsion stability 5% in 400 ppm, IHTP-03-MFS				Pass		Pass
Hard water Emulsion stability 5% in 400 ppm, QC-WI-071-GP	Pass					
Refractive Index factor @ 5% Emulsion in 400 ppm Water, Number, IHTP-01-MFS						1.3
Refractive Index factor @ 5% Emulsion in D.M. Water, Number, IHTP-001		0.92	1.5		1.2	
Refractive Index factor @ 5% Emulsion in D.M. Water, Number, IHTP-01-MFS				1.7		
Refractive Index factor @ 5% Emulsion in D.M. Water, Number, QC-WI-069-GP	1					
pH of 5% Emulsion in D.M Water, Number, IHTP-004		9.7	9.5		9.3	
pH of 5% Emulsion in D.M Water, Number, IHTP-04-MFS				9.6		9.7
pH of 5% Emulsion in D.M Water, Number, QC-WI-038-GP	9.6					

### 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](http://www.exxonmobil.com)  
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