



Mobilcut 231, 251

Product Description

Mobilcut 231 and 251 are high-performance, multi-purpose water-soluble, semi-synthetic cutting fluids. They are formulated from high quality base oils, emulsifiers and additives to provide effective machining performance in moderate and heavy duty machining operations on ferrous and non-ferrous materials.

Mobilcut 231 and 251 are readily emulsifiable in water and form stable micro-emulsions. The products are engineered to be suitable for a wide range of water qualities and are resistant to foaming, even in high pressure systems. Mobilcut 231 and 251 emulsions can provide extended coolant life relative to conventional soluble oils, with proper cutting fluid maintenance.

Mobilcut 231 is nitrite, diethanolamine, phenol and chlorine free. Mobilcut 251 is nitrite-free, diethanolamine-free, phenol-free, chlorine-free and boron free.

Features and Benefits

The Mobilcut 231 has gained a well-deserved reputation for outstanding performance over the years. Mobilcut 251 should be selected when heavy duty machining, low-staining and boron-free requirements are priorities. Mobilcut 231 and 251 provide multi-functional machining and lubrication capabilities. Features and potential benefits of the Mobilcut 231 and 251 Series include:

Features	Advantages and Potential Benefits
Excellent machining capabilities.	Increased production resulting from longer tool life and reduced downtime for tool changes and wheel dressing.
	Improves surface finish and dimensional accuracy resulting in fewer rejects and better quality finished parts.
	Increases productivity with potential increases in feed rates and machine speeds with no adverse effects on tool life or other factors.
Easy to monitor and maintain.	Assures consistent and reliable performance.
Wide application range.	Product rationalization possibilities and potential for reduced inventory costs.
Suitable for a wide range of water qualities.	Multi-site, multi-seasonal application range.
Free of chlorine, triazine biocides, diethanolamine, phenols and nitrites.	Safe to use and disposal is easier.
Excellent protection against rust and corrosion.	Helps to prolong the life of machine tools and can provide short term protection for work pieces.
Low odor.	Improves working conditions.

Applications

Mobilcut 231 and 251 are recommended for a wide range of machining operations on metals of various hardnesses. They can be equally used on both ferrous and non-ferrous metals.

Mobilcut 231 is suitable for moderate to heavy duty, tough machining of high carbon and alloy steels. Mobilcut 251 is suitable for heavy duty machining of steels and particularly for machining aluminum and its alloys with low staining potential.

Operations / Recommended Dilutions	Mobilcut 231	Mobilcut 251
Turning, drilling, milling	4-8%	6-8%
Heavy duty machining (ferrous)	5-8%	6-10%
Tough aluminum machining	4-8%	6-10%

To obtain the best performance using Mobilcut 231 and 251, it is recommended to clean and sterilize the machine by using Mobilcut ESC and then flush with diluted product.

Typical Properties

Mobilcut	231	251
Appearance	Amber Liquid	Dark Liquid
Specific Gravity @ 20°C	0.97	0.95
EmulsionType	Translucent	Semi-Translucent
pH @ 3% Emulsion	9.3	9.1
Corrosion test (IP 287) Breakpoint %	3.0	3.0
Refractometer Correction Factor	1.5	1.5

Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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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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