

Mobilmet® CCF Series

Oil Based Cutting Fluids

Product Description

Mobilmet CCF Series products are high performance, chlorine-free, oil based cutting fluids. The Mobilmet CCF Series oils are universal, transparent, super-duty (active), cutting oils designed by our formulation technologists for a wide range of applications. The products in the series contain an innovative and particularly effective additive combination and meet the highest demands of operation, cutting conditions, tool and work piece materials. The anti-mist agents reduce oil mist formation, resulting in lower airborne particulate matter and lower oil consumption. The light colour of the Mobilmet CCF Series permits excellent visual inspection of the tool and work piece, in contrast to other cutting oils in this performance grade. Each of the five products in the series, which differ in their viscosity, covers a wide range of applications. While the Mobilmet CCF Series is suitable for use with steel and nonferrous metals, machining of copper-containing alloys at elevated temperatures may cause staining of the work piece.

Mobilmet CCF product technology specifically designed for multipurpose application allows the requirements of several machining applications and various machining severities and metallurgies to be met with a single fluid. Their multipurpose capability and ease of application make Mobilmet CCF products the preferred choice among machine shop operators.

Features & Benefits

The Mobilmet brand of cutting fluids has gained a well-deserved reputation for innovation and outstanding performance over the years. The Mobilmet CCF Series of products maintains and extends this proud tradition by its use of special chlorine-free additive technology formulated by our research technologists. This technology yields superb performance in a wide range of applications, while providing the environmental and disposal benefit of being chlorine-free.

Additional features and potential benefits of Mobilmet CCF products include:

Features	Advantages and Potential Benefits
Outstanding cutting performance	Better finish and closer tolerances for top quality parts production; reduced need for finishing operations Increased tool life and reduced maintenance Less downtime, fewer rejects, and increased work piece output
Light colour, neutral odor and non-irritating to the skin	Improved ease of use and operator safety
Low misting	Lower oil consumption
Wide range of applications	Potential inventory savings
Chlorine-free	Reduced disposal costs
Very good oxidation stability	Extended batch life, reduced product replacement costs



Applications

Mobilmet CCF Series oils are universal cutting oils designed for a wide range of applications. Specific applications, by grade, include:

- Mobilmet Delta CCF is a light viscosity cutting oil optimised for deep hole drilling exceeding 25mm (I.D.), automatic lathe operations, small parts, cylindrical grinding, and gear flank grinding.
- Mobilmet Lambda CCF is a light viscosity active cutting oil targeted for deep hole drilling exceeding 20mm (I.D.), gear cutting (hobbing and shaping), automatic lathe operations, tapping, reaming, and milling.
- Mobilmet Beta CCF cutting oil is a medium-viscosity oil that will provide outstanding performance in general-purpose machine operations. It is recommended for nearly all machining operations on ferrous metals, except heavy-duty operations where tolerance and finish are critical, or for operations such as deep-hole drilling where low-viscosity oil is needed. It is suitable for all kinds of steel under normal cutting duty. Where staining is not critical, it may be used on brass, bronze, or other copper-bearing alloys. Its very high friction modification levels make it useful on tough, draggy metals. It contains an anti-mist agent.
- Mobilmet Theta CCF is a cutting oil with high anti-weld and lubricity compounding. It is recommended for more severe operations, such as high-duty threading, tapping, and broaching on difficult-to-machine metals. Unlike many conventional heavy-duty cutting oils, however, Mobilmet Theta CCF will operate efficiently on less-difficult materials. Where staining is not critical, it may be used on brass, bronze, or other copper-bearing alloys. This anti-mist-type oil is transparent and low-odor.
- Mobilmet Kappa CCF is an extremely heavy-duty cutting oil for hard-to-machine metals that need to be broached, tapped, or threaded.

Typical Properties

Mobilmet CCF Series	Delta CCF	Lambda CCF	Beta CCF	Theta CCF	Kappa CCF
Viscosity, ASTM D 445					
cSt @ 40° C	12.82	20.61	30.45	33.44	41.4
cSt @ 100° C	3.2	4.4	5.6	5.8	6.8
Specific Gravity @15° C kg/l, ASTM D 1298	7.211	7.304	7.359	7.368	7.38
Total Sulphur, ASTM D 2622, wt-%	2.25	2.438	2.34	2.359	2.346
Active Sulphur, ASTM D 1662, wt-%	-	1.916	1.752	1.633	1.73

Health & 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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