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SAWBLADES, MACHINES & OILS

Sawcraft UK Ltd.
Penncricket Lane, Rowley Regis, B65 0RE, United Kingdom
☎ +44 121 561 5616 enquiries@sawcraft.co.uk www.sawcraft.co.uk

Jaycool Cutting Oil Technical Data Sheet V10/26R

A micro emulsion semi synthetic metalworking fluid

Jaycool Cutting Oil is a cost effective, semi-synthetic coolant specifically formulated for machining and grinding cast iron and steel. This formulation achieves the highest levels of ferrous rust protection whilst also maintaining low levels of foam even in soft water areas.

This clean running formulation also prevents the loading of grinding wheels, ensuring good surface finishes and minimal burning. The product forms a stable emulsion in both soft and hard waters and is inhibited against bacterial growth.

Jaycool Cutting Oil has been developed for moderate to difficult machining operations and contains HP (high performance) esters. It is suitable for use across a wide range of materials, ferrous, non-ferrous, and aerospace alloys.

Jaycool Cutting Oil exhibits excellent lubricity characteristics to provide both good tool life and surface finish making the product suitable for a whole variety of machining applications whilst maintaining machine cleanliness and excellent operator acceptability and skin compatibility.

Applications:

Reaming	Tapping and threading
Deep hole drilling and boring	Turning and general machining
Milling	Centerless grinding

Features & Benefits

Excellent performance characteristics
Contains HP ester additives
Biocide and chlorine free - Secondary amine free
Low foam in high pressure systems
Suitable on ferrous, non-ferrous, aluminum and aerospace alloys
Suitable for use in soft to hard water
Micro emulsion provides excellent flushing and cooling

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Typical Operations

Operation	Typical concentration	Operation	Typical concentration
Drilling & boring	8% to 12%	General machining	4% to 6%
Reaming	8% to 12%	Centerless grinding	3% to 10%
Threading, tapping	5% to 10%	Metal forming	4% to 12%
Broaching, sawing	8% to 10%	Turning, milling	4% to 6%

Jaycool Cutting Oil Typical Characteristics

Characteristic	Typical Data	Characteristic	Typical Data
Appearance	Blue	IP287 corrosion breakpoint	4%
Emulsion Appearance	Translucent	Specific Gravity (20oC)	1.0
PH (5% concentration)	9.4	Refractometer conversion factor	2.5

Additional Technical Information

Jaycool Cutting Oil is a truly versatile water-soluble metalworking fluid that can be used across a diverse range of metals, applications, and water hardnesses. The performance parameters of Jaycool Cutting Oil make it an ideal candidate product to be used throughout a machine shop as a high-performance general-purpose coolant and grinding fluid. If further information is required, please consult Sawcraft UK Ltd.

Jaycool Cutting Oil is free of boron; boric acid has been given the status of a SVHC (substance of very high concern). Boric acid derivatives are used in a number of water-mix metal working fluids. Although there has been a lot of work to prove that the boric acid derivatives do not contain free boric acid there has been a move in the market to move away from boric acid derivatives in water-mix metal working fluids.

Bio-stability - these products give excellent biocontrol, maintaining bacteria levels well within the HSE (Health and Safety Executive) guidelines.

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Corrosion inhibition - These products give equivalent corrosion protection, or better than boron containing products.

For maximum service life, coolant systems should be cleaned and sterilized by treatment with System Cleaner. This high-performance system cleaner can be used whilst production is continued for up to 24 hours prior to exchange fluids. Please refer to the System Cleaner data sheet for detailed application information or contact our office.

Operational Recommendations

Jaycool Cutting Oil is designed to be mixed with water; it has been developed to exhibit full multi-metal compatibility and is suitable for use in soft and hard water types.

Mix emulsions of Jaycool Cutting Oil with water by adding concentrate to water and then mixing or using a suitable proportioning mixer unit, these are available on request. The use of an airline to mix the solution is not recommended. Machine top up may require a weaker dilution than the initial machine charge concentration. Recommended concentrations can vary depending on operations, materials, tooling, coolant pressure, coolant flow. The above information is given for guidance. Please contact your representative for further advice.

Jaycool Cutting Oil should always be stored indoors and protected from frost. Good standards of hygiene and housekeeping should always be adopted when using any metalworking fluid. A separate SDS is available for this product.

As with all modern cutting fluids, concentration control is of paramount importance, therefore regular check by use of a refractometer is recommended for this product. It should be noted that the individual product refractometer correction factor should always be used to ensure accuracy.