



Coolube[®]

Advanced Metal Cutting Lubricant

Coolube® & MQL: The Future Of Metal Cutting Fluid

These days, “going green” is a concern for many manufacturers and implementing Minimum Quantity Lubrication (MQL) with Unist Coolube® is an easy step in that direction. MQL is the process of applying minute amounts of high-quality lubricant directly to the cutting tool/work piece interface instead of using traditional flood coolants. MQL minimizes your environmental impact by significantly reducing fluid usage and eliminating the need for coolant treatment and disposal. These benefits are multiplied further when using 100% biodegradable Coolube® lubricants which are formulated from renewable plant-based oils. When considering these facts along with the performance benefits of Coolube® and MQL, it becomes obvious that this is the future of metal cutting fluid!

What Makes Coolube® Unique?

Using the right lubricant is very important in MQL applications. The perfect lubricant will adhere to the surface of the tool and provide a thin, low friction barrier between the cutting tool and work piece. Studies have shown that Coolube® has superior properties which make it an ideal lubricant. Coolube's® polar properties create a strong consistent bond between Coolube® and metallic surfaces. This creates an even, strong, and durable layer of lubrication. Coolube® reduces friction 50% better than typical mineral oils-preventing heat buildup and resulting in longer tool life and a superior cut finish.

Coolube® is consumed in the process.



Environmental Impact

Coolube's® 100% natural, non-toxic, renewable plant oil-based composition makes it an ideal choice for manufacturers who care about their environmental impact. Coolube® contains no petroleum products, is 100% chlorine and silicone free and produces no harmful VOC's. Coolube® is completely biodegradable, yet still has a long shelf life.



- Improve tool life
- No employee health concerns
- Increase production speed
- Less housekeeping
- Increase chip value
- No coolant treatment or disposal
- No fluid oxidation (stickiness)
- No thermal shock with carbide tools

Coolube® contains no petroleum products.

It is 100% chlorine and silicone free and produces no harmful VOC's.



Impact On Your Shop

Coolube® is as good for your shop as it is for the global environment. Its non-toxic formula is safe for workers and will not cause dermatitis. Implementing MQL with Coolube® also eliminates coolant spills and overspray resulting in dry machines and floors and improved safety conditions.

Impact On Your Bottom Line

Coolube® is one of the most cost-effective metal cutting fluids available when you consider the amount of Coolube® required and the additional benefits it offers. Coolube® is most effective when applied sparingly. In a typical operation, the amount of Coolube® consumed in an eight hour shift is only a few ounces. This is in stark contrast to traditional flood coolant systems that require gallons of coolant, coolant filtering, testing, treatment, and disposal. Replacing a flood coolant system with Coolube® and a Unist MQL system eliminates these costs while often increasing tool life and improving surface finish. Additional savings include reduced housekeeping/cleaning costs and an increase in the recycling value of chips because they are clean and dry.

Increased Chip Value

Coolube®



Coolant





What Coolube® Is Right For You?

Coolube® lubricants are formulated from 100% natural, non-toxic, non-staining ingredients. Coolube® lubricants will not oxidize (become sticky or leave a residue) and are biodegradable.

Coolube® lubricants are available in three formulations:

- 2210 - Primarily for non-ferrous materials.
- 2210XP - Special formulation using our base product and extreme-pressure additives for use primarily on ferrous materials.
- 2210AL - Special formulation for use on aluminum and stainless steel.



SDS INFO:

| | | | |
|----------------------------------|----------------------|----------------------|----------------------|
| Odor | mild | characteristic | mild |
| Appearance | clear | yellow | clear |
| Solubility (H2O) | insoluble | insoluble | insoluble |
| Flash point | >400°F [200°C] | >400°F [200°C] | 199°F [93°C] |
| Oxidizing properties | none | none | none |
| Viscosity at 104°F [40°C] | 16 cSt [82 SUS] | 16 cSt [82 SUS] | <14.5 cSt [76 SUS] |
| Non-hazardous | yes | yes | yes |
| Biobased | yes (USDA certified) | yes (USDA certified) | yes (USDA certified) |

USE ON:

| | | | |
|------------------------|--------------------|--------------------|--------------------|
| Ferrous | recommended | highly recommended | not recommended |
| Non-ferrous | highly recommended | recommended | not recommended |
| Aluminum | recommended | recommended | highly recommended |
| Stainless steel | recommended | recommended | highly recommended |

All Coolube® lubricants are available as follows:

- 1 gallon [3.78 liters]
- 5 gallon pail [18.92 liters]
- 55 gallon drum [208 liters]

Download SDS at unist.com/sds

Coolube® Solid & Paste

Coolube® solid and paste are ideal lubricants for portable cutting tools as well as abrasive applications such as belt sanding and grinding. Apply Coolube® solid or paste directly to the cutting/grinding surface to prolong tool life and prevent heat buildup in the work piece/tool interface.

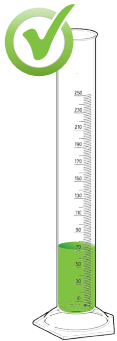


Unist MQL Application Systems

Coolube® is most effective when accurately applied with a Unist MQL application system. Unist systems feature precise air-operated metering pumps that can deliver Coolube® in quantities of less than a drop per cycle. Coolube® is typically mixed with a small amount of compressed air right at the nozzle tip to disperse the fluid and propel it to the cutting tool. The ability to precisely control both the fluid and air is the key to maximizing productivity when applying Coolube®. Unist manufactures a broad range of metal cutting application systems from basic systems for saws or drill presses to sophisticated electronically controlled systems for CNC machines. All of our systems feature a lifetime warranty on the fluid metering pumps when used exclusively with Coolube® lubricants.



The amount of Coolube® consumed in an eight hour shift is only a few ounces. Traditional flood coolant systems require gallons of coolant, coolant filtering, testing, treatment, and disposal.



What you need
Coolube®
+
Unist MQL system

Few ounces of Coolube® are used in an 8 hour shift



What you need
Coolant
+
Water filter
Skimmer
Refractometer
PH meter
Biocide
Titration kit
H2O Hardness test kit
chip/coolant vac

Gallons of coolant are used in an 8 hour shift

Save \$ Today!
With Unist Coolube®

**What Coolube® Product Is Right For You?
We Can Help!**

Contact us today at **800.253.5462**
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