

# product data sheet

## **VARGRIND 6010**

**High performance Synthetic Formaldehyde and Boron Free water soluble metalworking fluid.**

**VARGRIND 6010** is an oil free synthetic water-mix metalworking fluid which is suitable for tough machining operations. The product contains chlorine free lubricity additives which give excellent cutting performance and surface finish.

**VARGRIND 6010** has been developed to be free from Boron as Boric acid is a substance of very high concern (SVHC) resulting in the preference of some users to seek fluids which are free from Boric acid and its derivatives.

**VARGRIND 6010** is low foaming in use and can be used on through spindle coolant systems. It is suitable for use on a variety of steel alloys and can be used for the machining of non-ferrous alloys. The product is an extremely robust coolant and gives extended service life in the most difficult conditions.

### **Applications**

Grinding	Turning, Milling & Drilling
General machining	Tapping
Threading	Surface & cylindrical grinding

### **Features & Benefits**

Excellent performance characteristics	Chlorine free
Does not form sticky deposits	Suitable on all ferrous materials
Suitable for use in soft to hard water	Aluminium & Magnesium alloys
High levels of boundary lubrication	Yellow metals
High performance in arduous operations	Rejects tramp oil

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## Typical Operations

5% to 10% dependent on severity of operation

## VARGRIND 6010 Typical Characteristics

Characteristic	Typical Data	Characteristic	Typical Data
Emulsion Appearance	Translucent	IP287 corrosion breakpoint	2%
PH (@ 5% in DI water)	9.30	Refractometer conversion factor	2.0

## Additional Technical Information

**VARGRIND 6010** 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 VARGRIND 6010 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 your local selling agent or Varol Technical Department for further information

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

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

For maximum service life, coolant systems should be cleaned and sterilised by treatment with

**Varclean System Cleaner**. This high performance system cleaner can be used whilst production is continued for up to 24 hours prior to exchange of fluids. Please refer to the **Varclean System Cleaner** data sheet for detailed application information or contact your Varol sales agent.

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Varol Metalworking		Varol Machine Lubricants	
<b>Varcut</b>	Neat cutting oils, high performance, extensive range of viscosities	<b>Varlube S</b> Viscosity 32 - 320	Slideway
<b>Varform</b>	Comprehensive range of neat forming oils, including water extendable versions and vanishing oils	<b>Varmulti</b> Viscosity 32 - 680	Multilube - Slideway, Gear, Hydraulic
<b>Varclean</b>	Aqueous based wash fluids, surface cleaners and solvent degreasers	<b>Vargear</b> Viscosity 68 - 460	Industrial Gear
<b>Varcool &amp; Vargrind</b>	Comprehensive range of high performance water soluble fluids. Low, medium, high oil content and synthetics	<b>Varpress</b> Viscosity 5 - 150	Hydraulic oil range covering zinc containing, zinc free and high VI

## Operational Recommendations

**VARGRIND 6010** 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 **VARGRIND 6010** with water by adding concentrate to water and then mixing or use 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.

**VARGRIND 6010** 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.