

MACRON™ 2208 M-4

Neat Metal Cutting and Honing Oil

DESCRIPTION

MACRON 2208 M-4 is a grinding , honing and cutting oil for cast iron and harden steels.

MACRON 2208 M-4 is used for the honing of cast iron and hardened steels, hardened by tempering or cementation, producing short chips. The product is also used for the machining of light metals and glass at high cutting speeds or for the grinding of tools with diamond or ceramic wheels.

MACRON 2208 M-4 is based on highly refined mineral oils with a low aromatic content. A combination of optimum polar additives and anti wear additives provide the oils with high load carrying properties.

MACRON 2208 M-4 provides good tool life and good surface finish of the machined work piece. It does not contain Chlorine.

MACRON 2208 M-4 has a high Flash point, for safer working conditions.

MACRON 2208 M-4 can also be used for universal machining of light alloyed steels, yellow metals and light metals (Mg) and glass at high cutting speeds.

FEATURES

- Excellent for Grinding and honing
- Excellent tool and die life
- Low Foam
- Excellent surface finish
- High flash point
- No staining on Yellow metals
- Good detergency

TYPICAL VALUES

Product Appearance	Light Yellow Oil
Flash Point (COC)	> 125°C
Specific Gravity @29.5°C (ASTM D 4052)	0.827 kg/L
Viscosity @20°C	7.0 cSt
Viscosity @40°C	4.0 cSt
Viscosity @100°C	1.6 cSt
Copper Corrosion Test (ASTM D 130) :	1b

HEALTH AND SAFETY

Refer to MSDS for proper handling and disposal. Please note that the MSDS includes handling, health and disposal information which should be passed on to your employees, and to anyone else who comes in contact with our product. Additional advice can also be obtained from your local Houghton representative.

NOTE: Read and understand all precautions on container labels before using this product.

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This document contains information based on data that is believed to be correct. However, the product may not be applicable to all uses and operating environments. No warranty or guarantee is expressed or implied.

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REFERENCES

Houghton recommends that periodic checks of **MACRON 2208 M-4** should be carried out .

Checks will involve:

Viscosity@40°C: 2 - 6 cSt (In-use)

Water Content: < 0.02% (In-use)

These can be routinely performed and organised through Houghton's Customer Service laboratory, please contact your sales representative for further information about this service.

HOW TO USE

MACRON 2208 M-4 is used neat, as supplied, from the drum.

Apply by: Spraying, brushing or flooding.

The product **MACRON 2208 M-4** can also be used for universal machining of light alloyed steels, yellow metals and light metals.

SHELF LIFE & AVAILABILITY

Under normal conditions the recommended shelf life for **MACRON 2208 M-4** is a minimum of Twelve (12) months, unless otherwise specified.

MACRON 2208 M-4 is available in Pail, Drum or Tote. Other sizes may be available upon request , please contact your Houghton sales representative.

RELATED PRODUCTS

- CUT-MAX®: Straight cutting oils
- GARIA™: Straight cutting oils
- MACRON™: Straight cutting and honing oils
- EXCELENE™: Straight cutting and honing oils
- DASCOLENE™: Straight OEM approved cutting oils
- HOCUT®: Water miscible metalworking fluids
- DASCOOL™: Water miscible metalworking fluids
- DROMUS™: Soluble metalworking fluids
- ADRANA™: Micro-emulsion metalworking fluids
- SITALA™: Semi-Synthetic metalworking fluids
- METALINA™: Synthetic metalworking fluids
- HOUGHTO-GRIND®: Straight and water miscible grinding fluids
- HOUGHTO-DRAW®: Straight and water miscible drawing stamping and forming fluids.
- CINDOL™: Straight and water miscible drawing and forming fluids especially for Aluminium parts.
- FENELLA™: Straight and water miscible drawing, stamping and forming fluids.
- CERFA-KLEEN®: Water miscible cleaning fluids
- VIBRA-KLEEN®: Water miscible vibrating cleaning fluids
- CALLINA™: Water miscible cleaning fluids
- RUST VETO®: Straight and water miscible rust preventive fluids.
- ENSIS™: Straight and water miscible rust preventive fluids.
- COSMOLINE®: MIL-SPEC Straight and water miscible rust preventive fluids.

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