

MACRON™ 401 F-46

Neat Metal Cutting Oil

DESCRIPTION

MACRON 401 F-46 is a high performance cutting oil for operations on light and medium alloyed steels and on non-ferrous and light metals (Mg). **MACRON 401 F-46** are multipurpose oils which have characteristics from both hydraulic oil and gear oil (DIN 51524 T 2 and DIN 51517 T 3).

MACRON 401 F-46 oil is also used for the plane straightening and the straightening of shapes such as grooves and spheres. They have a good de-aeration power, do not foam much and are not aggressive for the paints on machine-tools. Their odour is neutral and they are well tolerated by the skin.

MACRON 401 F-46 are based on hydro treated mineral oils with a low aromatic content. A combination of polar, extreme pressure and anti wear additives provide the oils with high load carrying properties. The oils provide good tool life and good surface finish of the machined work pieces. High efficient anti mist additives reduce the mist load in the air.

There is no risk of staining by the machining of yellow metals.

MACRON 401 F-46 has a high Flash point, for safer working conditions.

TYPICAL VALUES

Product Appearance	Light Yellow Oil
Flash Point (COC)	> 210°C
Specific Gravity @29.5°C (ASTM D 4052)	0.887 kg/L
Viscosity @20°C	139 cSt
Viscosity @40°C	46 cSt
Viscosity @100°C	6.6 cSt
Copper Corrosion	1a

FEATURES

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

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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REFERENCES

Houghton recommends that periodic checks of **MACRON 401 F-46** should be carried out .

Checks will involve:

Viscosity@40°C: 38 - 52 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 401 F-46 is used neat, as supplied, from the drum.

Apply by: Spraying, brushing or flooding.

The product **MACRON 401 F-46** 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 401 F-46** is a minimum of Twelve (12) months, unless otherwise specified.

MACRON 401 F-46 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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