

# GARIA™ 405 M-32

## Neat Metal Cutting Oil

### DESCRIPTION

**GARIA 405 M-32** is a neat cutting oil for machining of high alloyed steels.

**GARIA 405 M-32** is recommended for general machining operations such grinding, drilling and gear hobbing on steel of low to medium tensile strength.

**GARIA 405 M-32** is based on highly refined mineral oils with a low aromatic content and free of chlorine.

There is a well balanced combination of polar, extreme pressure and anti-wear additives which give to the oil high load carrying properties.

**GARIA 405 M-32** provide good tool live and good surface finish of the machined work pieces. High efficient anti mist additives reduce the mist load in the air.

### FEATURES

- Medium duty machining and grinding of ferrous and materials
- Drilling
- Gear Hobbing
- Counterboring and reaming
- Grinding
- Shaping
- Excellent tool and die life
- Low Foam
- Minimal oil mist
- Excellent surface finish

### TYPICAL VALUES

Product Appearance	Light Yellow Oil
Flash Point (COC)	> 200°C
Specific Gravity @20°C (ASTM D 4052)	0.868 kg/L
Viscosity @20°C	72.0 cSt
Viscosity @40°C	32.0 cSt
Viscosity @100°C	5.1 cSt
Copper Corrosion Test (ASTM D 130) :	4a

### 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.

01 July 2011 Version 1.0, Code: D901L2461



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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 **GARIA 405 M-32** should be carried out .

Checks will involve:

Viscosity@40°C: 26 - 38 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

**GARIA 405 M-32** is used neat, as supplied, from the drum.

Apply by: Spraying, brushing or flooding.

**GARIA 405 M-32** can be diluted with light oil for light machining operations.

Due to active sulphur in **GARIA 405 M-32** , there is a risk of staining of yellow metals.

### SHELF LIFE & AVAILABILITY

Under normal conditions the recommended shelf life for **GARIA 405 M-32** is a minimum of Twelve (12) months, unless otherwise specified.

**GARIA 405 M-32** 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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