

Shell MACRON® and Shell GARIA® Oils

Neat Oils



Neat Oils for cutting and grinding operations

Shell offers a comprehensive line of neat oils that helps to extend tool life for applications ranging from light-duty cutting to heavy-duty broaching. Select grades offer high performance in both high-speed grinding operations as well as for special applications such as the manufacturing of cemented carbide tools. Shell Macron and Shell Garia Oils address common operational demands such as high lubricity, longer tool life, light color, low odor, reduced oil mist, while maintaining an excellent HSSE profile.

Shell Macron Oils - do not stain yellow metals

- For light to medium machining of copper metals, aluminum, steel and cast iron
- Selected grades for honing and grinding
- MACRON® 221 CM-32 is a tri-purpose oil for cutting, machine lubrication and hydraulic applications

Shell Garia Oils - active chemistry

- For medium to severe cutting of aluminum, cast iron, steel and stainless steel
- Contain active sulphur for efficient reduction of built-up edges (BUE)
- High additive content for long service life and resistance to dilution with tramp oils

Shell Macron EDM - light color, low volatility

- Shell MACRON® EDM 130, universal dielectric oil that is mild in odor and light in viscosity. Provides excellent tool grinding, filterability, and oxidation stability.

Success story - Shell GARIA® 405M-22 neat cutting and grinding oil



Who: A Global Precision Bearing Manufacturer

Application: Turning and grinding on a variety of bearing grade alloy steels

Situation prior to Shell product use:

The bearing manufacturer was experiencing several problems with the use of a competitive neat oil:

- Poor Surface Finish
- Heavy Oil Misting
- Smoke

Situation after Shell product used:

Shell GARIA® 405M-22 exhibited the following results after replacing a competitors fluid in the same applications:

- Increase in tool life
- Higher quality parts that resulted from increased quality of surface finish
- Decrease in oil misting due to anti-misting chemical technology
- Increase of flash point which resulted in reduced smoke generation

* Shell Metalworking is a team of metalworking specialists within the Shell Lubricants group.



Shell Lubricants



Core Portfolio Neat Oils

	Turning	Drilling	Threading	Milling	Gear Cutting	Hobbing	Tapping	Broaching	Grinding	Deepholedrilling	Honing	EDM	Yellow Metals	Aluminum	Cast Iron	Steel	Stainless
MACRON® 221 CM-32	●	●	●	●	●				●				●	●	●	●	
MACRON® 222 CM-58	●		●	●	●				●				●	●	●	●	
MACRON® 221 M-32	●	●	●	●	●				●				●	●	●	●	●
MACRON® 2208 M-4	●	●		●					●		●		●	●	●	●	●
MACRON® 2425 S-14	●	●		●					●		●		●	●	●	●	●
MACRON® 2429 S-8**	●	●		●					●		●		●	●	●	●	●
MACRON® EDM 130									●		●	●	●	●	●	●	●
GARIA® Alum-Mag									●		●		●	●	●	●	
GARIA® Alum-Mag Special	●	●		●					●		●		●	●	●	●	
GARIA® 405 M-22	●	●	●	●	●	●	●	●	●					●	●	●	●
GARIA® 405 M-32	●	●	●	●	●	●	●	●	●					●	●	●	●
GARIA® 421 M-12	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●
GARIA® 421 CM-12	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●
GARIA® 496 CF-26	●	●	●	●	●	●	●	●	●					●	●	●	●
GARIA® 601 M-12	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●
GARIA® 601 M-22	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●
GARIA® 621 M-36	●	●	●	●	●	●	●	●	●	●				●	●	●	●
GARIA® 621 CM-36	●	●	●	●	●	●	●	●	●	●				●	●	●	●
GARIA® 623 CS-52	●	●	●	●	●	●	●	●						●	●	●	●
GARIA® 699 CM-16	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●

Value after F, M or S in product name is the viscosity at 40°C. **Special product for tungsten carbide grinding.

● Recommended for most applications ● Suitable for most applications ● May be used in some applications

Product selection information is provided for general guidance only. Consult your Shell Metalworking specialist or Technical Information Center for specific recommendation.

For Technical Assistance: 1-800-231-6950, Orders and Other Inquiries: 1-800-840-5737

www.shell.com/us/lubricants