



SHELL MACRON 401 F - 22 & 32 & 46 *SHELL MACRON Oil MX 22 & 32 & 46(Previous name)*

Metal Working **Neat Cutting Oil**

- Chlorine free
- Low aromatic components
- Low oil mist and vapour

APPLICATIONS

Shell Macron 401 F-22 & -32 & -46 are a high performance cutting oils for operations on light and medium alloyed steels and on non-ferrous and light metals (Mg)
Shell Macron 401 F-22 & -32 & -46 are multipurpose oils which have characteristics from both hydraulic oil and gear oil (DIN 51524 T 2 and DIN 51517 T 3). Shell Macron 401 oils are 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.

CHARACTERISTICS

Shell Macron 401 F-22 & -32 & -46 are based on hydrotreated 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 workpieces. High efficient anti mist additives reduce the mist load in the air.
There is no risk of staining by the machining of yellow metals.

TYPICAL PHYSICAL CHARACTERISTICS OF SHELL MACRON 401 F-22 & -32 & -46

	Unit	Method	Shell Macron 401 F-22	Shell Macron 401 F-32	Shell Macron 401 F-46
Kinematic viscosity		ASTM D 445			
• at 20°C	mm ² /s		47	86	139
• at 40°C	mm ² /s		22	32	46
• at 100°C	mm ² /s		3,8	5,8	6,6
Density at 20°C	kg/m ³	ASTM D 4052	865	868	887
Flash point COC	°C	ASTM D 92	190	210	210
Cu-Corrosion Test	Alfa	ASTM D 130	1a	1a	1a
Appearance			Yellow	Yellow	Yellow

These characteristics are typical of current production.

Whilst future production will conform to Shell's specification, variation in these characteristics may occur.

REMARKS

-Storage

Recommended temperature: 5 - 40 °C
Storage time: 3 years
Storage class (VCI-concept): 10

-Compatibility

With other Macron oils or similar based neat cutting oils.

-Health and Safety

For further information please mind the current material safety data sheet.