

MOL Emolin 420

biostable metalworking fluid



MOL Emolin 420 is an universal, biologically stable, boron containing, water-miscible semi-synthetic metalworking fluid. The product contains about 30 % refined mineral oil, emulsifier, corrosion inhibitor, together with components that modify friction and prevent wear. It is recommended to use mixing equipment for preparing the emulsion. The concentrate is always to be added to water during agitated mixing. The concentration of the prepared emulsion should be checked using a calibrated refractometer. Due to its balanced composition containing amine and boric acid, the product is resistant to biological contaminations so a long service life can be achieved if it is handled properly. Refractometer factor: 1,9. Cleanliness of the system is a determining factor in terms of the operating life of the emulsion, so it is recommended to use MOL Netsol SC system cleaner before every change. Resistance to micro organisms can be ensured by maintaining a minimum emulsion concentration of 4-5 % (V/V).

Machining	Application concentration
Grinding	4-6
Turning	5-7
Drilling	5-10
Milling	5-8

Application



Chip forming and chipless machining of steel, alloys, light and yellow metals

Various cutting technologies (turning, drilling, thread machining, etc.)

Chip forming machining of difficult-to-machine steels and cast aluminium with silicon content

Chip forming machining of spheroidal graphite and grey cast iron

High performance heavy-duty chip forming machining

Features and benefits

Excellent lubricity

Efficient wear reduction even during heavy-duty machining, giving a long service life of tool edges
Excellent machined surface quality and high manufacturing precision
Low concentration, improved specific emulsion consumption, reduced lubricant costs
Higher productivity, so reduced manufacturing costs

Extremely low foaming tendency

Forms a continuous lubricating film, giving a balanced cooling effect and lubricity, excellent surface quality and high production accuracy
Highly applicable in equipment operating at high pressure

Excellent stability against microbial infection

Low maintenance requirements
Long charge drain period, pleasant working environment and cost efficiency

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Features and benefits (continue)

Outstanding temporary corrosion protection	Reduced manufacturing and surface treatment costs
Universal	Wide range of applicability enables reduction of the number of lubricating oils Suitable for use in both individual and central supply systems
Excellent washing properties	Excellent machined surface quality Clean machine-tool and workpieces, even with cast machining
Ready miscibility with water	Simple and quick emulsion preparation
Excellent hard water resistance	Forms a stable emulsion even with hard water No separation or sticky residues are formed on machines and workpieces
Excellent filterability	Reduced maintenance costs and environmental impact
Mild odour	More comfortable working environments
Free of nitrites and secondary amines	Beneficial in terms of workplace health requirements
Free of formaldehyde releasers	Reduced occupational health risk
Compatibility with soft water	Optimal foaming tendency in case of soft water (10°dH)

Specifications and approvals

ISO 6743-7: L-MAF

Properties

Properties	Typical values
Appearance	red, homogeneous, slightly opalescent
Density at 15°C [g/cm ³]	1,005
Kinematic viscosity at 40°C [mm ² /s]	82
Emulsion pH value (5% (V/V) / 12 dH°)	9,4
Emulsion foaming characteristics (5 % (V/V) / 12dH°)	
- foam volume promptly (5 % (V/V) / 12dH°) [cm ³]	25
- foam vanishing time (5% (V/V) / 12dH°) [s]	5
Emulsion stability (5% (V/V) 12 dH°)	
- oil separation (5 % (V/V) / 12 dH°)	free
- cream separation (5 % (V/V) / 12 dH°)	in traces
Anticorrosion effect - Filter-paper test (5% (V/V) / 20 dH°) [grade]	0

The characteristics in table are typical values of the product and do not constitute a specification.

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Storage and handling instructions

Store in the original container in dry, properly ventilated area. Keep away from direct flame and other sources of ignition. Protect from direct sunlight. To preserve the original quality keep the suggested storage temperature. During transport, storage and use of the product follow the work safety instructions and environmental regulations relating to mineral oil products.

In the concentration specified for use and in case of keeping the health safety rules, the emulsions are not harmful to human health and do not cause skin affection.

For further details please read the Material Safety Data Sheet of the product.

In the original container under the recommended storage conditions: 6 months

Recommended storage temperature: +5°C - +40°C

Ordering information

Custom Tariff Number 34031980

SAP code and packaging:

13009396 MOL Emolin 420 200KG

216.5 l steel drum

Order booking:

Please contact your local distributor or sales partner for ordering details.