# **MOL Makromil 100 Special**





MOL Makromil 100 Special is a boron-free water-miscible cutting fluid having high mineral oil content. The product contains refined mineral oils, emulsifier, corrosion inhibitor, as well as components that modify the friction. The use of mixing equipment is recommended for preparing emulsions. The concentrate is always added to the water during agitated mixing. The concentration of the prepared emulsion should be checked using a calibrated refractometer. Refractometer factor: 1,0. Cleanliness of the system is a determining factor in terms of the operating life of the emulsion, so the use of MOL Netsol SC system cleaner is recommended before every change. The resistance to micro organisms can be ensured by maintaining a minimum emulsion concentration of 4-5 % (V/V).

Mashining	Application concentration
Brass strip pressing	3-4
Machining	4-6

### **Application**









Low- and medium-duty forming operations of fine sheets (stamping, punching, bending, deep drawing etc.)

Extrusion, chip forming machining of aluminium sheets

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

Long lubricant drain period, pleasant working environment and cost

efficiency with regular fluid control and maintenance

#### Features and benefits

Good surface wetting properties	Efficient wear reduction, long service life of tool edges and reduced specific tool cost
Excellent corrosion protection	No staining on copper workpieces
Low foaming tendency	Forms a continuous lubricating film, giving a balanced cooling effect and lubricity Reduced environmental impact
Effective temporary corrosion protection	Reduced manufacturing and surface treatment costs
Mild odour	More comfortable working environments
Effective washing and rinsing properties	Clean machining equipment, tool and workpiece
Ready misciblility with water	Simple emulsion preparation
Free of boron, nitrites and secondary amines	Beneficial in terms of workplace health requirements

Stability against microbial

infection

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## **Specifications and approvals**

EMAG ISO 6743-7: L-MAA

#### **Properties**

Properties	Typical values	
Emulsion pH value (5% (V/V) / 12 dH°)	8,0	
Emulsion foaming characteristics (5 %(V/V) / 12dH°)		
- foam volume promptly (5 %(V/V) / 12dH°) [cm3]	40	
- foam vanishing time (5%(V/V) / 12dH°) [s]	7	
Emulsion stability (5% (V/V) 12 dH°)		
- oil separation (5 %(V/V) / 12 dH°)	free	
- cream separation (5 %(V/V) / 12 dH°) [cm3]	3	
Anticorrosion effect (2% (V/V) / 12dH°)		
- cast iron (2 %(V/V) / 12 dH°)	negative	
Anticorrosion effect (5% (V/V) / 12dH°)		
- copper (5 %(V/V) / 12 dH°)	negative	
- aluminium (5%(V/V) / 12 dH°)	negative	
Appearance of emulsion (5% (V/V) / 12dH°)	milky	

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

#### 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: 12 months

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

### **Ordering information**

Custom Tariff Number 27101991

#### SAP code and packaging:

 13006438
 MOL Makromil 100 Special 50KG
 60 I steel drum

 13006437
 MOL Makromil 100 Special 180KG
 216.5 I steel drum

#### Order booking:

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

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