

# MAK FORM AL

High quality wire drawing oil for Aluminium and its alloys

MAK Form AL has been specially designed for wire drawing applications of Aluminium and Aluminium alloys. It is blended from highly refined, hydroprocessed base stock fortified with special EP and select lubricity additives. Surface finish and die life depend on the lubrication at the die and work piece interface. The chosen lubricity additive ensures reduction of friction at the contact point. The special additive chemistry helps providing low residue, excellent resistance to oxidation and extended operating life. This oil is based on non-active chemistry.

### Applications:

MAK Form AL is a neat drawing oil for Aluminium and Aluminium alloys. It forms an extremely strong lubricating film on the bearing, pulley and the wheel. The lubrication is maintained even at elevated temperatures.

### Performance/ Benefits:

**Excellent EP property** – inactive sulphur provides excellent ability to withstand higher loads and shock loads encountered in the drawing application. It provides protection to die and wheel and also ensures superior surface finish to the job.

**Good Surface Finish** – superior quality oiliness and wear protection additives along with the ability to block environment moisture provide very good surface finish.

**Outstanding Thermal and Oxidation Resistance** – prevents the formation of sludge and residue. Enhances the life and reduces the cost of operation.

**Excellent Lubricity** – contains fatty oil to provide excellent lubricity and to reduce friction. It improves the surface finish and extends die life.

**Antifoaming Characteristics** – prevents foam generation during operation and helps maintaining continuous oil film between moving parts.

**Excellent Rust Protection** – rust and corrosion protection for both die and work materials.

**Low Volatility** – excellent resistance to evaporation even at high temperatures. Reduces consumption.

**Low Oil Mist Characteristics** – produces low mist and smoke formation tendency. Reduces oil consumption and provides good working environment.

**Low Viscosity** – aids separation of Aluminium fines and maintains pumpability.

**Washability** – possesses good washability that facilitates easy removal of oil using mild alkaline or solvent cleaners.

### Specification:

- Proprietary Grade

### Typical Physico-Chemical Data: MAK Form AL

Characteristics	Method	Value
Appearance	Visual	Clear
Colour	Visual	Brown
Density, g/cc @15 <sup>o</sup> C	ASTM D 1298	0.883
Copper Corrosion, 100 <sup>o</sup> C, 3 hrs.	ASTM D130	1b
Pour Point, <sup>o</sup> C,	ASTM D 97	-9
Flash Point, COC, <sup>o</sup> C	ASTM D92	260
Kinematic Viscosity @40 <sup>o</sup> C, cSt	ASTM D 445	160
Saponification Value	ASTM D 94	15
Weld Load, kg	ASTM D 2783	126

### Additive:

Ester	Fatty Oil	Zinc	Sulphur	Chlorine	Phosphorus
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### Storage & Handling:

The product should be stored inside. Keep it properly sealed to avoid contamination. Avoid freezing. Shelf life is 3 yrs. under protected storage conditions.

### Health & Safety:

It is unlikely to be hazardous when properly used in recommended applications. Contamination of the oil from other oils, greases, chemicals, dirty water etc. can occur during the use. It should be avoided. Regular monitoring of the in-use product is recommended.