

# **MAK STAMPING OIL**

# High quality oil for forming and stamping application

MAK Stamping Oil has been formulated for forming and stamping application. Highly refined hydro-processed base stocks and multifunctional additives together impart superior antiwear and excellent load carrying capability. Inactive type extreme pressure characteristics enable to withstand high and shock load. Easy-washability formulation of the oil allows easy removal of it off the finished surfaces. The chosen additive system ensures better surface finish, extended die life and reduction in oil consumption. It also provides rust and corrosion protection to the metal.

#### **Applications:**

MAK Stamping Oil is suitable for forming and stamping of all grades of steel. This low viscosity oil is suitable as a forming and stamping lubricant for car or cab body drawing applications. It is suitable for non-ferrous metals also.

Recommended Use	Cast Iron	Alloy Steel	Carbon Steel	Al. Alloy	Yellow Metals
Forging					
Drawing		$\sqrt{}$	<b>VV</b>	$\checkmark$	$\checkmark$

 $\sqrt{\sqrt{}}$  Main applications,  $\sqrt{}$  Check with supplier

## Performance/ Benefits:

**Excellent EP and Antiwear properties** – inactive sulphur provides excellent ability to withstand higher loads and shock loads encountered in the stamping applications. It provides protection to die and also ensures superior surface finish to the job.

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

**Outstanding Washability** – facilitate easy cleaning of left over oil from the surface. Enables to prepare the work piece before it is processed further. Enhances productivity.

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

**Low Deposit Formation** – leaves little or no deposit on the work piece and the die. Ensures dimensional geometry and cleaner work piece.

**Superior Rust & Corrosion Protection** – prevents rusting and corrosion. Rapidly separates water. Fewer unscheduled stoppages and lower maintenance costs.

### **Specification:**

Proprietary Grade

**Typical Physico-Chemical Data: MAK Stamping Oil** 

Characteristics	Method	Value
Appearance	Visual	Clear & Bright
Density, g/cc @15°C	ASTM D1298	0.866
Copper Corrosion, 100°C, 3 hrs.	ASTM D130	1a
Flash Point, COC, <sup>o</sup> C	ASTM D92	245
Pour Point, <sup>o</sup> C	ASTM D97	-12
Kinematic Viscosity @40°C, cSt	ASTM D445	64.5
Kinematic Viscosity @100°C, cSt	ASTM D445	9.5
Viscosity Index	ASTM D2270	128
Weld Load, kg	ASTM D2783	126

### Additive:

Ester	Fatty Oil	Zinc	Sulphur	EP	Phosphorus
	$\checkmark$		$\sqrt{}$	$\checkmark$	$\sqrt{}$

#### 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.