



# MAK TRIPONOL TDH

## High performance Pilgering oil

MAK Triponol TDH is blended from highly refined, high viscosity index base oils and lubricity additive. Coupled with extreme pressure additive this oil the unique properties suitable for the most severe working conditions. It has been specifically developed keeping in consideration the loads and materials involved in severe drawing operations like pilgering. An appropriate combination of lubricity and load bearing properties in this grade helps reduce friction and minimise contact between die and work-piece. This action is critically important to produce high quality parts with superior surface finish and improve the service life of tools and dies. It is based on active chemistry and not suitable for yellow metals.

### Applications:

MAK Triponol TDH is designed for pilgering application for ferrous metals like alloy steel and carbon steel. Pilgering application is used to make tubes with small outer diameters or with small wall thickness which cannot be extruded. Pilgering oil is required both inside and outside the tube to remove heat and reduce wear and friction between tube and mandrel and also between tube and dies. It is also suitable for pilgering of zirconium tubes. It can be used for cold reducing and deep drawing applications of stainless steel and high nickel alloy steels.

Recommended Use	Cast Iron	Alloy Steel	Carbon Steel	Al. Alloy	Yellow Metals
Grinding	--	--	--	--	--
Pilgering	--	√√	√√	--	--
Deep Drawing	--	√√	√√	--	--

√√ Main applications

### Performance/ Benefits:

**Excellent EP property** – active chemistry offers excellent extreme property that reduces friction between die and the work piece. Provides good load bearing capability and protection to tools along with superior surface finish. It has exceptionally high weld load.

**High Lubricity** – provides excellent lubricity even under severe load, ensures superior surface finish. Extends die life. Reduces rejection.

**Enhanced Tool Life** – excellent lubricity reduces wear of tool, die and mandrel.

### Specification:

- Proprietary Grade

### Typical Physico-Chemical Data: MAK Triponol TDH

Characteristics	Method	Value
Appearance	Visual	Clear & Bright
Colour	Visual	Light Yellow to Amber
Density, g/cc @29°C	ASTM D 1298	1.214
Copper Corrosion, 100°C, 3 hrs.	ASTM D130	4a
Flash Point, COC, °C	ASTM D92	182
Pour Point	ASTM D97	-9
Kinematic Viscosity @40°C, cSt	ASTM D 445	260
Weld Load, kg	ASTM D 2783	900

### Additive:

EP	Ester	Fatty Oil	Sulphur	Zinc	Phosphorus
√	--	√	√	--	--

### 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.