



MAK METAMOL R

Premium quality lubricating oils for pneumatic tools

MAK Metamol R grades are high quality lubricating oils developed from highly refined high viscosity index paraffinic base stock and carefully selected additive package. The high quality base stock combined with the additive package imparts outstanding ability to maintain oil film and effectively lubricate the demanding requirements of pneumatic mechanisms. MAK Metamol R has been exclusively developed to meet the special lubrication requirements of all percussion type pneumatic tools including those subjected to the most arduous conditions. MAK Metamol R oils maintain oil protective films both in low and high pressure and do not emit obnoxious odour even with equipment operating in confined spaces. They also offer excellent lubricity, wear resistance and adhesive characteristics. MAK Metamol R oils are compatible with the paints normally specified for use in industrial pneumatic machines with mineral oils.

Grades: MAK Metamol R range is available in the following ISO VG grades – **100** and **220** and Non-ISO VG grade – **181**.

Applications:

MAK Metamol R grades are recommended for lubrication of Percussion type pneumatic tools. These oils are also used for lubrication of pneumatic equipment such as rock drill, jack hammers, chippers, wagon drills etc. and in small in-plant pneumatic tools like grinders, filing tools, drills, tappers, impact wrenches etc. The excellent adhesiveness of these oils forms a tenacious lubricant film on the rock drills moving parts which will not get washed away even by incidental contact with water which is very common in the compressed air driving the piston.

Performance/ Benefits:

Excellent Lubricity Property – possesses excellent lubricity and anti-wear properties in order to provide high film strength even in high pressure applications. Ensures reliability, longer operating life and less maintenance.

High Impact Strength and Wear Protection – offers excellent load carrying ability and withstands heavy shock loads typical of rock drill equipment. Provides protection against rapid wear and offers long equipment life.

Excellent Adhesive Characteristics – prevents wash off by any incidental contact with water. Offers excellent protection in wet environments. Maintains system efficiency.

Low Odour and Toxicity – offers conducive working environment to operators.

Good Anti-Corrosion & Anti-Rust Property – provides protection to all components against rusting and corrosion.

Good Thermal and Oxidation Stability – resists the formation of sludge and other harmful products of oxidation. Allows longer operating life.

Specification:

- Proprietary grade

Additive:

| Ester | Fatty Oil | Sulphur | Chlorine | Phenol | Phosphorous |
|-------|-----------|---------|----------|--------|-------------|
| -- | √ | √ | -- | -- | -- |

Storage & Handling:

The product should be stored inside. Keep it properly sealed to avoid contamination. Avoid freezing. Shelf life is 5 yrs. under protected conditions.

Health & Safety:

They are 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.

**Typical Physico-Chemical Data: MAK Metamol R**

| Characteristics | Method | 100 | 181 | 220 |
|---------------------------------|------------|----------------|----------------|----------------|
| Colour | Visual | Brown | Brown | Brown |
| Appearance | Visual | Clear & Bright | Clear & Bright | Clear & Bright |
| Density, g/cc @15°C | ASTM D1298 | 0.91 | 0.9393 | 0.9443 |
| Kinematic Viscosity @40°C, cSt | ASTM D445 | 100.3 | 181.5 | 220.5 |
| Kinematic Viscosity @100°C, cSt | ASTM D445 | 11.37 | 16.68 | 18.71 |
| Viscosity Index | ASTM D2270 | 99 | 96 | 94 |
| Flash Point, COC, °C | ASTM D92 | 240 | 250 | 260 |
| Pour Point, °C | ASTM D97 | -9 | -9 | -9 |
| Copper Corrosion, 100°C, 3 hrs. | ASTM D130 | 4c | 4c | 4c |
| Weld Load, kg | ASTM D2783 | 800 | 800 | 800 |