

## Multi-Use Industrial Oils

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**AMALIE Multi-Use Industrial Oils** is formulated as a general workshop oil to bring slide-way, hydraulic, and gear performance in a single lubricant. The product thus allows significant inventory and supply chain cost reduction and minimizes the possibility of lubricant misapplication. **AMALIE Multi-Use Industrial Oils** protect ways which often carry machine tools in severe environments. Performance attributes that are needed by a sideway lubricant can vary significantly from application to application, though the following are very common: Anti-wear/extreme pressure performance, anti-rust performance, yellow metal corrosion resistance, and anti-oxidant performance. In addition, the smooth operation of the way can lead to improved accuracy and quality, so strong friction performance as measured by stick-slip resistance is essential. Given the proximity of the way to machine tools and their cutting fluids, a degree of separation from the cutting fluid is also needed. Indeed, emulsion-type cutting fluids will not be damaged by mixing with **AMALIE Multi-Use Industrial Oil**, as often this fluid is separated and circulated back to the cutting tool. This product is formulated in various ISO viscosity grades, with varying high and low temperature properties depending on ambient conditions.

### Benefits

- Multiple Service Oil
- Excellent Wear Protection
- Excellent Corrosion Protection
- Good Anti-Oxidative Performance

### Typical Physical and Chemical Properties

| AMALIE Multi-Use Industrial Oils |      |      |      |
|----------------------------------|------|------|------|
| ISO Viscosity Grade              | 32   | 68   | 220  |
| API Gravity                      | 29.5 | 27.0 | 25.0 |
| Flash Point, °C                  | 200  | 220  | 240  |
| <b>Kinematic Viscosity</b>       |      |      |      |
| @ 100°C, cSt                     | 32.0 | 68.0 | 220  |
| @ 40°C, cSt                      | 5.4  | 8.8  | 19.5 |
| Viscosity Index                  | 100  | 100  | 100  |
| Pour Point, °C                   | -18  | -15  | -15  |

### PERFORMANCE APPLICATION CHART

| SPECIFICATIONS                     | Multi-use Industrial Oils |
|------------------------------------|---------------------------|
| AGMA 9005-D94                      | Gear                      |
| Cincinnati Machine                 | Slideway                  |
| DIN 51517                          | Hydraulic                 |
| GM LS-2                            | √                         |
| US STEEL 224                       | Gear                      |
| Rust, ASTM D 665A, B               | √                         |
| Corrosion, ASTM D 130              | √                         |
| Timkin OK load, 60 lb. min         | √                         |
| FZG Load StagePass (12 pass)       | √                         |
| Demulsibility ASTM D 2711(pass)    | √                         |
| Oxidation, S-200 (pass)            | √                         |
| Foam Inhibition, ASTM D 892 (pass) | √                         |