

## Magna SW D Range

Slideway oils

### Description

Castrol Magna<sup>®</sup> SW D (previously called Magnaglide D Range) is specially formulated for the lubrication of slideways on machine tools. These oils are fortified with selected oiliness, extreme pressure additives and a special material to impart tackiness and adhesiveness.

Magna SW D lubricants are noted for their usual ability to overcome the stick-slip motion ordinarily associated with slow moving tool parts. They reduce machine tool carriage chatter and possess the necessary adhesive characteristics to prevent squeezing out of the lubricant.

### Application

- Magna SW D can be used on all horizontal and vertical slideways where a high quality demulsifying lubricant is required for slideway protection and to maximize coolant life; the outstanding frictional characteristics of the products prevents stick-slip, improving surface finish and tolerances of machined components and reducing rejection rates.
- Magna SW D meets the exacting demands in the following applications; planers, grinders, horizontal boring machines, shapers, jig borers, and milling machines.
- Magna SW D 32 can be used as a combined hydraulic and slideway oil.
- The Magna SW D range meets the requirements of:
  - Cincinnati Lamb (Milacron) P-47, P-50 and P-53 (depending on viscosity grade)
  - DIN 51502 – CGLP
  - DIN 51524 Part II (July 2004) – including ISO 13357-1/-2 filtration test
  - Suitable for Müller Weingarten equipment as hydraulic oil

### Advantages

- Outstanding demulsifying properties – helps prevent soluble oil emulsions on plastic slideway surfaces.
- Avoids downtime and expensive slideway repair or replacement.
- Exceptional resistance to stick slip – helps to ensure highly accurate and repeatable machining.
- High quality output is maintained.
- Protects metals against staining and corrosion.
- Oil-wetted surfaces remain in good condition.
- Avoids downtime and expensive slideway repair or replacement.
- Highly filterable – filters in oil supply remain unblocked

# Typical Characteristics

| Name   | Method                 | Units              | SW D 32   | SW D 68   | SW D 100  | SW D 220  |
|--|------------------------|--------------------|-----------|-----------|-----------|-----------|
| ISO Viscosity Grade  | -                      | -                  | 32        | 68        | 100       | 220       |
| Density @ 15°C / 59°F  | ASTM D4052 / ISO 12185 | kg/m <sup>3</sup>  | 870       | 880       | 890       | 890       |
| Kinematic Viscosity @ 40°C / 104°F   | ASTM D445 / ISO 3104   | mm <sup>2</sup> /s | 32        | 68        | 100       | 220       |
| Kinematic Viscosity @ 100°C / 212°F  | ASTM D445 / ISO 3104   | mm <sup>2</sup> /s | 5.4       | 8.7       | 11.1      | 19.2      |
| Viscosity Index  | ASTM D2270 / ISO 2909  | -                  | 102       | 99        | 98        | 98        |
| Pour Point   | ASTM D97 / ISO 3016    | °C/°F              | -15/5     | -12/10    | -12/10    | -9/15     |
| Flash Point - open cup method  | ASTM D92 / ISO 2592    | °C/°F              | 206 / 403 | 232 / 450 | 232 / 450 | 249 / 480 |
| Rust test - distilled water (24 hrs)                                       | ASTM D665A / ISO 7120  | -                  | Pass      |           |           |           |
| Rust test - synthetic seawater (24 hrs)                                    | ASTM D665B / ISO 7120  | -                  | Pass      |           |           |           |
| Copper corrosion (3 hrs@100°C/ 212°F)                                      | ASTM D130 / ISO 2160   | Rating             | 1b        |           |           |           |
| Brugger test   | DIN 51347              | N/mm <sup>2</sup>  | -         | 44        | -         | -         |
| Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1200 rpm / 1 hr) | ASTM D2266             | mm                 | 0.3       | 0.3       | 0.3       | 0.32      |
| Four Ball Weld Load test - Weld Point                                      | ASTM D2783             | kgf                | 170       | 180       | 180       | 200       |
| Stick-slip ratio - Cincinatti Lamb test                                    | Cincinatti Lamb test   | Ratio              | 0.74      |           |           |           |
| Cincinatti Lamb Specification  | -                      | -                  | P-53      | P-47      | -         | P-50      |

Subject to usual manufacturing tolerances.

**This product was previously called Magnaglide D Range. The name was changed in 2015.**

Magna SW D Range

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