



## **ANTI-WEAR HYDRAULIC OILS**

FORMULA 500® Anti-Wear (AW) Hydraulic Oils are superior anti-wear hydraulic and circulating fluids specially formulated with high quality base stocks and improved thermally stable zinc additives. These oils offer outstanding resistance to sludge formation, are chemically stable, and exhibit excellent anti-wear properties. FORMULA 500® AW Hydraulic Oils also contain anti-foam agents to limit air entrainment in hydraulic systems, and demulsifiers to separate water from the oil in the sump.

FORMULA 500® AW Hydraulic Oils are recommended for service in vane, piston, and gear pumps when used according to the manufacturers' recommendations. The oils provide maximum service life to these pumps as well as other system components. FORMULA 500® AW Hydraulic Oils ISO 10 and ISO 22 products can also be used as spindle lubricants.

FORMULA 500® AW Hydraulic Oils meet the following specifications:

- Denison HF-0, 1, and 2
- Eaton Vickers M-2950-S, I-286-S, E-FDGN-TB002-E
- Fives Cincinnati P-68, 69, 70
- ISO 11158, 6743/4

- US Steel 126, 127, and 136
- DIN 51524 Part 2
- BoschRexroth RDE 90235 (ISO 32)

Sales:

Operations:

(314) 525-2568

(618) 542-5431

- German Steel Industry SEB 181222
- VDMA 24318

## **Typical Properties:**

| Product: FORMULA 500® Anti-Wear Hydraulic Oils |           |           |        |        |        |           |           |
|--|-----------|-----------|--------|--------|--------|-----------|-----------|
| ISO Viscosity                                  | 10        | 22        | 32     | 46     | 68     | 100       | 150       |
| Product Code                                   | 90418     | 1211      | 1212   | 1213   | 1214   | 1215      | 1216      |
| Kinematic Viscosity @ 100°C, cSt (ASTM D-445)  | 2.76      | 4.6       | 5.6    | 7.0    | 8.7    | 11.4      | 15.0      |
| Kinematic Viscosity @ 40°C, cSt (ASTM D-445)   | 11.2      | 23.2      | 31.6   | 45.3   | 65.6   | 100.0     | 150.0     |
| Viscosity Index (ASTM D-2270)                  | 77        | 117       | 116    | 113    | 106    | 100       | 100       |
| RPVOT, min (ASTM D-2272)                       | (no data) | 300       | 300    | 300    | 300    | 200       | 200       |
| Emulsion Separation, min (ASTM D-1401)         | (no data) | 10        | 10     | 15     | 15     | 15        | 15        |
| Pour Point, °C (ASTM D-5949)                   | -51       | -42       | -36    | -33    | -30    | -30       | -27       |
| Flash Point, °F (ASTM D-92)                    | (no data) | (no data) | 435    | 446    | 470    | (no data) | (no data) |
| TOST, hours (ASTM D-943)                       | (no data) | (no data) | 5,000+ | 5,000+ | 5,000+ | (no data) | (no data) |