

## **DELTAFLUID ISO 22, 32, 46, 68, 100, 150**

**Premium Performance series of hydraulic fluids blended in HYDRO-SYN™ Base oils designed for use in mobile and stationary high pressure hydraulic systems. DeltaFluids are formulated with an advanced zinc anti wear additive package which provides protection in applications of circulating oils, bearing oils and as a mild EP industrial gear lubricant.**

### **Performance Features**

- Longer equipment life - The advanced zinc anti-wear additive package reduces wear by protecting metal sliding surfaces when load stresses the lubricant film.
- Reduced downtime - The advanced rust and oxidation inhibitor additives prevent the production of moisture and oil breakdown, which can damage equipment surfaces and seals, and block filters prematurely.
- Trouble free operation - Good hydrolytic stability and water separation characteristics provide excellent filterability in the presence of water contamination. Good anti foam and air release properties ensure smooth operation and system efficiency.
- Extended oil service life - High oxidation stability resists oil thickening and deposit formation in service, eliminating the need for unscheduled change of hydraulic fluid
- Meets and/or exceeds German designation DIN 5152-4 as a HLP/HVLP hydraulic fluid and ISO 6743-4 as a HM/HV hydraulic fluid.

### **Applications**

Formulated for the lubrication of a wide range of mobile and stationary equipment providing high resistance to; rust and oxidation, foaming of oil and demulsibility of entrapped moisture with excellent anti wear properties for maximum protection of all metal parts.

**Hydraulics:** Particularly suited to all types of hydraulic systems and vane, gear or piston pumps, operating at high or low temperatures, pressures and speeds. Suits equipment containing silver plated components. Grades 32, 46 and 68 are highly recommended for use in earthmoving hydraulic systems and of mobile and stationary plant.

**Gears:** May be used in lightly loaded gear boxes containing spur, helical, double helical and straight bevel gearing. Not recommended for spiral bevel, hypoid and worm gears or where EP gear lubricants are specified.

**Bearings:** Suitable for ball and roller bearings, and plain bearings. In selecting a viscosity grade to suit the bearing size, temperature of operation and speed of rotation, the manufacturers' recommendations should be adhered to.

**Compressors:** Suitable for most types of compressors, particularly reciprocating compressors. Widely used as turbine oils and in factory circulating systems. Also suitable for fluid couplings and transmission chains operating in oil tight casings and is also recommended in air-line lubricators as a moisture trap.

**TECHNICAL DATA SHEET****Specifications**

Denison Hydraulics HF-0, HF-1, HF-2      Mannesmann Rexroth (RE 07 075)  
 US Steel 127, 136  
 GM LH-04-1, LH-06-1, LH-15-1      AFNOR N-SE 48/691 WET  
 SAVER DANFOSS      Deutsche Industrie Norm (DIN) 51524 Part-3 HVLP  
 Vickers I-286-S (industrial applications), M-2950-S (mobile applications) (ISO 32, 46, 68)  
 Cincinnati MILACRON P-68 (ISO 32), P-69 (ISO 68), P70 (ISO 46)  
 International Organisation for Standardization (ISO) Standard 6743-4 Part 4 Type HM/HV  
 American Automobile Manufacturers Association (AAMA) Standard 524 Part 2 (ISO 32, 46, 68, 100)  
 David Brown Industrial Gears 0A, 1A, 2A, 3A, 4A, 5A (ISO 32 to 220)  
 Society of Automotive Engineers (SAE) MS 1004, HM (ISO 32, 46, 68,100)

| TEST DESCRIPTION                           | ASTM        | TEST RESULT  |              |              |              |              |              |
|--|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
|  |             | 22           | 32           | 46           | 68           | 100          | 150          |
| ISO Viscosity Grade                        |             | 22           | 32           | 46           | 68           | 100          | 150          |
| Viscosity, cSt @ 40°C, mm <sup>2</sup> /s  | D-445       | 21.48        | 32.84        | 46.16        | 67.77        | 99.71        | 152.6        |
| Viscosity, cSt @ 100°C, mm <sup>2</sup> /s | D-445       | 4.20         | 5.52         | 7.13         | 8.94         | 11.89        | 19.51        |
| Viscosity Index                            | D-2270      | 113          | 112          | 106          | 107          | 109          | 117          |
| Density @ 15°C, kg/L                       | D-4052      | 0.854        | 0.848        | 0.859        | 0.869        | 0.865        | 0.873        |
| Copper Strip Corrosion, 3 hr, 100°C        | D-130       | 1b           | 1b           | 1b           | 1b           | 1b           | 1b           |
| FZG Scuffing, Fail Load Stage, A/8.3/90    | ISO 14635-1 |              | 12           | 12           | 12           | 12           | 12           |
| Foam, Sequence I,II,III Stability, ml      | D-892       | 0            | 0            | 0            | 0            | 0            | 0            |
| Foam, Sequence I,II,III Tendency, ml       | D-892       | 20           | 20           | 20           | 20           | 20           | 20           |
| Pour Point, °C                             | D-97        | -30          | -28          | -26          | -22          | -22          | -17          |
| Flash Point (COC), °C                      | D-92        | 200          | 221          | 232          | 238          | 248          | 277          |
| Rust Characteristics, Procedure B          | D-665       | PASS         | PASS         | PASS         | PASS         | PASS         | PASS         |
| <b>PRODUCT CODE</b>                        |             | <b>90206</b> | <b>90207</b> | <b>90208</b> | <b>90209</b> | <b>90210</b> | <b>90211</b> |

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*Typical formulation specifications at time of production, minor variations may occur.*