

Product Description

D-A **eco-flo**™ series is a performance engineered, readily biodegradable, non-toxic hydraulic oil. It is specifically designed for use in environmentally sensitive applications for all modern high pressure hydraulic powered systems. This lubricant begins with naturally high viscosity index base oils for temperature shear stability and is formulated with our advanced **ChemGuard**™ additive technology.

The D-A **ChemGuard**™ innovative formula has vigorous anti-wear inhibitors that effectively reduce scuffing and wear in severe environments. It also delivers superior protection against corrosion and combats against rust and oxidation (R&O) for industrial gear applications.

D-A **eco-flo**™ series is rigorously tested for its performance as well as its environmentally safe components. This product is highly recommended for use in monitored or environmentally sensitive locations.

Product Features and Benefits

Limits wear in low and high pressure vane pumps for longer pump life and reduced operating cost.

Provides wear control for steel, brass and bronze pump parts when operating at maximum pressure ratings, resulting in excellent pump protection and more cost efficient operation.

Can be used in both mobile and stationary hydraulic equipment as well as applications requiring an R & O oil for gear box and speed reducer lubrication, giving service flexibility and minimized inventory.

Special rust and corrosion inhibitors limit rusting of ferrous metals and corrosion of yellow metals.

Typical Applications

| | | |
|--------------------------|-------------------------------|---|
| Axial Piston Pumps | ASTM D6158 | DIN 51524, part 2 |
| Construction Machinery | Bosch Rexroth RE 90220 | Eaton-Vickers 35VQ25 |
| Hydraulic Power | Cincinnati Machine | General Motors LS-2 (LH-03-1, LH-04-1, LH-06-1) |
| Systems Hydraulic Drills | P-68 (ISO 32), P-69 (ISO 68), | ISO 11158 |
| Industrial Gear Drives | P-70 (ISO 46) | Parker Hannifin HF0, HF1, HF2 |
| Rotary Air Compressors | Commercial Hydraulics | SAE MS 1004 |

Typical Properties

Applies to all grades:

| | | | |
|------------------|-----------------|------------------|-----------------------|
| | <u>Standard</u> | <u>Test Data</u> | <u>Classification</u> |
| Biodegradability | OECD 301B | >60% @ 28 days | Readily biodegradable |

| | | | |
|---------------------------|-------------|-----------|-----------|
| ISO Viscosity Grade | Test Method | 32 | 46 |
| Viscosity @ 100°C, cSt | ASTM D445 | 7.5 | 9.5 |
| @ 40°C, cSt | ASTM D445 | 32 | 46 |
| Viscosity Index | ASTM D2270 | 207 | 210 |
| Pour Point, °F (°C) | ASTM D97 | -36 (-38) | -35 (-37) |
| Flash Point, °F (°C) | ASTM D92 | 500 (260) | 510 (266) |
| API Gravity | ASTM D4052 | 21.2 | 20.6 |

D-A Part Number:

| | | |
|------------------------|-------|-------|
| Bulk | 53321 | 53331 |
| Tote – 330 Gal | 53323 | N/A |
| Drum – 55 Gal | 53322 | 53332 |
| Pail (Plastic) - 5 Gal | 53328 | 53338 |