



TECHNICAL DATA BULLETIN

**6601-6604
LOW TOX[®]
Hydraulic Oil**

DESCRIPTION:

Low toxicity hydraulic oil designed with advanced product technology that gives performance equivalent to premium hydraulic fluids, yet affords low eco-toxicity to address environmental concerns. Has a low order of toxicity compared to standard commercial hydraulic oils and biodegradable hydraulic oil.

PHYSICAL CHARACTERISTICS—TYPICAL:

| | 6601 | 6602 | 6603 | 6604 |
|----------------------|-------------|-------------|-------------|-------------|
| ISO Grade | 32 | 46 | 68 | 100 |
| Gravity, °API | 29.3 | 28.3 | 28.3 | 28.0 |
| Viscosity, | | | | |
| SUS @ 100°F | 165.8 | 227.4 | 353.2 | 500.2 |
| SUS @ 210°F | 44.4 | 48.3 | 56.9 | 67.2 |
| cSt @ 40°C | 32.3 | 44.3 | 68.6 | 96.9 |
| cSt @ 100°C | 5.5 | 6.7 | 9.2 | 12.0 |
| Viscosity Index | 95 | 95 | 95 | 95 |
| Flash Point, °F (°C) | 420 (216) | 470 (244) | 515 (268) | 515 (268) |
| Pour Point, °F (°C) | 0 (-18) | 10 (-12) | 10 (-12) | 10 (-12) |
| Color | Straw | Straw | Straw | Straw |

TEST RESULTS:

| | | | | |
|--|----------------|----------------|----------------|----------------|
| Copper Strip Corrosion, ASTM D-130, Color Code | 1b | 1b | 1b | 1b |
| Salt Water Rust Test, 48 hrs., ASTM D-665B | No Rust | No Rust | No Rust | No Rust |
| Rotary bomb Oxidation Test, mins. (typical), ASTM D-2272 | 1,180 | 1,180 | 1,180 | 1,180 |
| Demulsibility, ASTM D-1401, ml oil-ml water-ml emulsion (min.) | 40-40-0 (5) | 40-40-0 (5) | 40-40-0 (5) | 40-40-0 (5) |
| Microtox Bioassay, EC50, mg/L, min. | >100,000 | >100,000 | >100,000 | >100,000 |
| Vickers Vane Pump Wear Test, ASTM D-2882, Total Wt. Loss | <50 mg | <50 mg | <50 mg | <50 mg |
| Cincinnati Machine Thermal Stability | Pass | Pass | Pass | Pass |
| Dielectric Strength, ASTM D-877, min. | 35 kV | 35 kV | 35 kV | 35 kV |

MEETS PERFORMANCE REQUIREMENTS OF:

Vickers Industrial (I-286-S)
Cincinnati Machine – P-70 — 6602

Denison HF-O
Cincinnati Machine – P-69 — 6603
Cincinnati Machine – P-68 — 6603

APPLICATION:

Designed for use where environmental concerns require the use of a very low toxicity hydraulic oil. Applications include hydroelectric facilities, flood control structures, locks, offshore installations, construction equipment, forestry equipment, dredges, water treatment plants, etc.

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**LE PRODUCTS MANUFACTURED UNDER AN
ISO 9001:2000 CERTIFIED QUALITY SYSTEM**