



# Indol<sup>®</sup> NZ

## Non-Zinc, Anti-Wear, Multi-Grade Hydraulic Oil ISO 46 MV

### General Description

Indol<sup>®</sup> NZ is a premium quality non-zinc ashless multi-grade, anti-wear 46 MV hydraulic oil. It is designed to exceed the performance requirements of major pump and equipment builders that require the use of a non-zinc hydraulic oil.

This oil is specially formulated with the highest quality HCG-2 base oils and has outstanding oxidation and thermal stability. The addition of the uniquely balanced non-zinc additive system provides total anti-wear, oxidation, thermal and hydrolytic stability along with rust corrosion, demulsifying capabilities and anti-foam protection.

Indol NZ ISO 46 MV is a multi-viscosity oil formulated with an extremely shear stable viscosity modifier. It provides exceptional low temperature properties enabling performance over a wide range of startup and operating temperatures, which improves hydraulic efficiency and machine productivity.

**The mixing of any non-zinc hydraulic oil with hydraulic oils containing zinc or calcium should be avoided. There have been industry concerns about possible incompatibility, filter plugging and deposits.**

**A complete system drain of zinc-free fluid and filter change is required before any zinc containing fluid can be added or used.**

### Features and Benefits

- **Wear Protection:** The non-zinc anti-wear technology provides exceptional film strength resulting in longer pump life caused by minimizing wear in high speed, high pressure vane, gear and piston pumps using various metallurgies.
- **Oxidation Control:** Excellent oxidation and thermal stability reduces sludge, varnish and carbon deposits providing protection of critical hydraulic components while extending oil and equipment life.
- **Filterability:** Superior hydrolytic stability with quick water separation provides protection against deposits and filter plugging.
- **Rust and Corrosion Protection:** Outstanding rust and corrosion prevention in the presence of moisture.
- **Foam Control:** A balanced anti-foam system promotes rapid air release and minimizes foam.
- **Viscosity Stability:** The outstanding shear stability provides exceptional viscosity control resulting in consistent operation throughout a wide temperature range.
- **Reserve Quality:** Ability to maximize oil life and equipment performance under the toughest operating conditions.
- **Environmental Impact:** Indol NZ can help reduce environmental impact and should be considered for environmentally sensitive areas. It does not contain heavy metals which have the potential for water or soil contamination.

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### Typical Applications

- Denison HF-0 (Hybrid Pump), HF-1, HF-2
- Cincinnati Lamb P-70
- Bosch- Rexroth RE 90220
- Eaton Vickers (35VQ25) I-286-S, M2950-S
- USS 127, AFNOR 48-603
- DIN 51524 HVLP, Part 2/3
- GM LS-2, LH-0402
- ASTM D-943 Oxidation Test: > 8,000 Hrs

### Typical Customers

Owners and Operators of:

- Mobile/industrial hydraulic systems calling for a non-zinc, ashless, anti-wear hydraulic oil
- Hydraulic systems that would benefit from a multi- grade non-zinc oil with a wide operating temperature range

### Typical Properties

<b>ISO Viscosity Grade</b>	<b>46 MV</b>
Approximate SAE Grade	5W-20
API Gravity / lbs./gal.	32.4 / 7.2
Viscosity @ 100°C, cSt	8.4
@ 40°C, cSt	45.6
Viscosity Index	157
Pour Point, °C / °F	-48/-54
Brookfield @ -35 °C, cp	20,000
MRV @ -35°C, cp	20,500
FZG gear test, stages	12
D-665A/B Rust Test	Pass
D-130 Copper Protection	Pass
Foam Seq. I, II, III	Pass
Dielectric Strength, KV	40*

\*Dielectric Strength only in new sealed drums and 5-gallon containers from CHS Lubricant manufacturing plants.

The typical properties listed reflect the general characteristics of the product, and are not manufacturing specifications. Normal batch-to-batch variations should be expected.

### Health & Safety

A complete safety data sheet is available by calling 1-651-355-8438 or visit [cenex.com/sds-library](http://cenex.com/sds-library).