

PRODUCT DESCRIPTION

Premium NRO-Z 46 is a HVLP high quality premium hydraulic oil which delivers higher wear protection, improved resistance to aging, outstanding extreme pressure (EP) properties and excellent viscosity index designed for wider operating temperature range and heavy loads. Formulated with premium base oils highly effective zinc containing additives to guarantee optimal and long-term protection against wear and oxidation. Provides better lubrication efficiency and optimal fluid viscosity to reduce energy consumption, minimized components wear and tear, both aid in extending the overall life of the equipment. Outstanding hydrolytic stability and fast water separation.

Premium NRO-Z 46 meets the requirement of major hydraulic equipment OEMs. Long term protection of steel and non-ferrous metal parts even in the presence of moisture. Rapid air release to reduce the risk of cavitation for longer equipment life.

APPLICATION

Recommended for use in modern high pressure hydraulic systems, which require anti-wear oils for effective protection against deterioration. For hydraulic systems in which gear, vane, and other pumps are used.

WARRANTY

Premium NRO-Z 46 meets or exceeds the OEM's warranty requirements of hydraulic systems where zinc containing additives of hydraulic oil with an ISO viscosity grade 46 is required. TOTACHI® guarantees full compliance on the written specifications indicated on product labels.

CUSTOMER BENEFITS

- **Excellent Wear Protection**
Higher zinc containing hydraulic oil for more reliable equipment protection and longer equipment life.

- **Optimum Lubrication in Extreme Operating Conditions**
Higher viscosity index to provide reliable operation in wider operating temperatures. Higher lubricating action in all moving components of hydraulic system.
- **Extended Equipment Life**
Reliable anti-wear protection even in severe operating conditions. Rapid water separation properties to help in the reduction of sludge and deposits, leading to an increased efficient and system reliability.
- **Saves Cost**
Maximizes oil drain intervals and ensures durability of hydraulic systems to cut operating downtime and untimely maintenance.

MEETS SPECIFICATIONS & REQUIREMENTS OF:

- AFNOR NF E 48-603 HM and HV
- AFNOR NF E 48-690
- AFNOR NF E 48-691
- BOSCH REXROTH RDE-90220 (HLP)
- CINCINNATI MACHINE P-70
- DENISON HF-0, HF-1, HF-2
- DENISON T6C-020 VANE PUMP
- DIN 51 524 Part 3 (HVLP)
- EATON BROCHURE 694, 03-401-REV 2010
- EATON VICKERS I-286-S
- EATON E-FDGN-TB002-E
- GM LS2
- ISO 11158 HV
- JCMAS P041
- JB/T 12194-2015
- US STEEL 126, 127, 136
- ASTM D6158 HM
- SAE MS 1004
- CHINA GB 11118, 1-2011 L-HM
- ZF TE ML 07M
- ZF TE ML 21M

Suitable for use in hydraulic systems requiring zinc containing additives.

Before using this product, ensure it is consistent with OEM's recommendations for the equipment operating conditions and customer's maintenance practices.

TYPICAL TEST DATA

CHARACTERISTICS	UNITS	VALUES	STANDARDS
ISO Grade	-	46	
Kinematic viscosity at:			
40 °C	cSt	47.40	ASTM D445
100 °C	cSt	8.14	ASTM D445
Viscosity index	-	145	ASTM D2270
Color	-	TBD	ASTM D1500
Flash point	°C	TBD	ASTM D92
Pour point	°C	-39	ASTM D6892
Density at 30 °C	kg/L	0.8688	ASTM D4052

STORAGE AND HANDLING GUIDELINES

- Avoid exposing products to direct sunlight.
- Store in cool and dry places. Avoid exposing products to moisture.
- It is highly recommended to store drums indoors or under cover on pallets and racks.

HEALTH, SAFETY & ENVIRONMENT PROTECTION

Information on health, safety and environment protection is described in the product Safety Data Sheet (SDS). The SDS file contains details on potential hazards, precautions and first aid measures, as well as information on environmental impact and disposal of used products.

TOTACHI INDUSTRIAL CO. LTD. disclaims any liability in case the product is used with violation of these instructions and warnings, or it is not used for its intended purpose. Before using product other than intended, consult your local TOTACHI® distributor.