ENEOS

JAPAN'S No.1 Oil Company

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SUPER HYRANDO

High-Performance Anti-Wear Hydraulic Fluid

Product Data Sheet

DESCRIPTION

Super Hyrando is a hydraulic fluid with superior anti-wear characteristics for use in all types of hydraulic equipment. When used in a high pressure pump, Super Hyrando not only provides excellent wear-prevention but also anti-seizure protection during shock loading. Super Hyrando also has superior oxidation and thermal stability. Special additives ensure that this product remains stable even under high heat and moisture conditions.

Super Hyrando is a high-grade anti-wear hydraulic fluid that provides the rust and oxidation stability of most all R&O-type fluids. It is suited for use in all types of hydraulic pumps and motors, from low to high pressure, and will maximise the operating performance in any type of hydraulic machinery.

ADVANTAGES

- ✓ **Excellent Wear-Protection**
  - Superior anti-wear characteristics to prevent wear on modern high pressure, high-performance pumps and valves. It also greatly reduces the amount of wear and scuffing in heavily loaded hydraulic system components.
- ✓ **Wide Operating Temperature Range**
  - High-viscosity index and low pour point so that temperature related viscosity change is minimised.
- ✓ **Superior Rust Protection**
  - Prevents corrosion throughout the entire hydraulic system with its advanced anti-corrosion properties.
- ✓ **Superior Oxidation and Thermal Stability**
  - Protected against oxidation and thermal degradation even in hydraulic systems with severe operating conditions.
- ✓ **Long Service Life**
  - Superior shearing stability reduces change in viscosity even during extended periods of use.

APPLICATIONS

A full range of viscosity grades allows for the use of this product in metal bending and machining equipment, extrusion presses, injection presses, machine tools, construction equipment, marine deck equipment, cargo machinery, mining machinery and many others.

CONTAINER SIZE

20 Litre 200 Litre

GRADES

The various grades of Super Hyrando are divided into different grades according to their kinematic viscosity measured at 40°C.

The optimum viscosity for a hydraulic fluid depends on the type of the pump employed and the specific operating conditions of each system. Always remember to select a hydraulic fluid that matches the pump manufacturer's recommendations.

There are seven grades of Super Hyrando with viscosities ranging from ISO VG 22 to ISO VG 150.

Safety Precaution:

- Avoid prolonged and repeated skin contact with used oils
- In case of physical contact, wash immediately with soap and water
- Protect the environment by disposing off used oils as per local regulations

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TYPICAL CHARACTERISTICS

ISO Viscosity Grade	22	32	46	56	68	100	150
Colour (ASTM)	L0.5	L0.5	L0.5	L1.0	L1.0	L1.0	L1.5
Density (15°C) g/cm^3	0.866	0.869	0.872	0.874	0.875	0.882	0.886
Viscosity mm^2/s (40°C)	23.0	32.6	45.8	55.7	68.0	105.5	157.0
(100°C)	4.44	5.49	6.86	7.77	8.73	11.92	15.54
Viscosity Index	105	105	105	105	105	101	100
Acid Value mgKOH/g	0.46	0.46	0.46	0.47	0.46	0.49	0.46
Flash Point °C	210	226	242	252	258	276	278
Pour Point °C	-35	-32.5	-30	-27.5	-25	-25	-20
Rust Test (distilled and sea water, 24h)	pass	pass	pass	pass	pass	pass	pass
Oxidation Stability (120°C, 70h)	pass	pass	pass	pass	pass	pass	pass
Copper Corrosion (100°C, 3h)	1	1	1	1	1	1	1

Note: Typical characteristics are subject to change without notice (Aug, 2017)

Handling Precautions

Follow the following precautions when handling this product.

- Read this product's Material Safety Data Sheet before using the product.
- Obey all applicable laws and regulations concerning the handling and disposal of this product, particularly laws and regulations related to fire safety, the treatment and disposal of waste and sewage, the prevention of water and ocean pollution, and workplace safety and hygiene.
- Please request the Material Safety Data Sheet where you purchased this product.

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