

HYRANDO WIDE

A MULTIGRADE, ANTIWEAR HYDRAULIC OIL

HYRANDO WIDE is a hydraulic oil appropriate for hydraulic devices that demand low changes in viscosity resulting from changes in temperature. It is also appropriate for use outdoors in cold climates, in freezers, and in other low-temperature environments. This hydraulic oil is particularly effective in equipment requiring good low-temperature starting characteristics, and it offers superior energy savings by helping to reduce electrical consumption.

● SPECIAL FEATURES

1. Superior Temperature Characteristics

HYRANDO WIDE is made from agents specially selected to improve the viscosity coefficient. It has a high viscosity coefficient of 140, and temperature changes cause little change in its viscosity. Its pour point is low, and it provides stable performance across a wide range of temperatures.

2. Excellent Lubricity

HYRANDO WIDE includes highly effective anti-wear agents, making it the ideal hydraulic oil for preventing wear in the hydraulic pumps and valves of the latest high-pressure, high-performance hydraulic equipment.

3. Good Prevention of Abnormal Noise from Hydraulic Cylinders

When the temperature of an actuator oil increases, under some operating conditions stick-slips can occur in the seal materials of the rods or pistons of hydraulic cylinders. This creates abnormal noise.

HYRANDO WIDE reduces stick-slips in hydraulic cylinders and provides superior prevention of abnormal noise.

4. Superior Heat and Oxidation Stability

HYRANDO WIDE has excellent heat and oxidation stability, so it provides long life with low deterioration even when used under high temperatures.

● APPLICATIONS

1. In construction machinery, flood locks, and other hydraulic equipment used outdoors in cold climates.
2. In hydraulic equipment used in freezers.
3. In measuring gauges and other precision hydraulic devices.

4. In remote-control devices for deck equipment on ships.
5. In a wide range of other hydraulic machinery requiring low pour points and high viscosity indexes.

● SHIPPING CONTAINERS

200-liter drums and 20-liter cans.TITLE

TYPICAL TEST DATA FOR HYRANDO WIDE

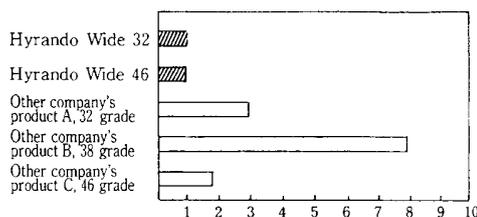
Viscosity Grade		15	22	32	46	100
Specific gravity(15°C)	g/cm ³	0.836	0.840	0.842	0.857	0.882
Viscosity (40°C)	mm ² /s	16.0	24.0	32.9	48.4	94.0
	(100°C)	3.94	5.18	6.37	8.20	13.7
	(-20°C)	414	848	1550	4600	—
Viscosity index		149	154	145	145	148
Pour point	°C	-45	-40	-40	-40	-37
						5
Flash point	°C	206	204	238	236	248
Color(ASTM)		LO.5	LO.5	LO.5	LO.5	L1.0
Total acid number	mgKOH/g	0.41	0.41	0.41	0.41	0.48
Copper strip corrosion (100°C,3h)		1	1	1	1	1

● SHEAR STABILITY OF HYRANDO WIDE

It is important that the hydraulic oil used in hydraulic equipment maintain a proper viscosity. In general, though, when hydraulic oil with a high viscosity index is used for long periods of time, its polymer additives rupture and the viscosity of the oil decreases.

HYRANDO WIDE's carefully selected viscosity-improving agents provide it with excellent shear stability.

Acoustic Shear Stability Test (10kC, 60min.)



Shear stability, decrease in viscosity (% , at 40°C)



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 Date Sheet where you purchased this product.