

IND-4019-2104E

SUPER HYRANDO SE-P

High performance anti-wear hydraulic fluids with difficult to producing sludge

SUPER HYRANDO SE-P which has flash points above 250 °C is anti-wear hydraulic fluid with difficult to producing sludge. Because it is blended with friction modifier additives, it provides much better energy-saving performance than conventional mineral-oil-based hydraulic fluids. **SUPER HYRANDO SE-P** has outstanding longer fluid life because it is blended with highly refined base oil and new ashless additives in order to prevent sludge formation. **SUPER HYRANDO SE-P** also has good anti-seizure performance for withstanding shock loads in addition to its excellent anti-wear performance, and is suitable for all types of hydraulic pumps and motors with the operating condition in a wide range of low- to high-pressure.

● SPECIAL FEATURES

1. Guaranteed Flash Points above 250 °C

SUPER HYRANDO SE-P has guaranteed flash points above 250 °C.

2. Excellent Energy-Saving Performance

SUPER HYRANDO SE-P is blended with friction modifiers that provide excellent friction characteristics and reduce the friction resistance in hydraulic pumps, valves, and actuators. As a result, hydraulic systems that use **SUPER HYRANDO SE-P** can consume less electricity than systems that use conventional hydraulic fluids.

3. Outstanding Oxidative and Thermal Stability

Because **SUPER HYRANDO SE-P** is blended with highly refined base oil and new types of ashless additives, it produces extremely little sludge, so it can be used for longer periods even at high temperatures and high pressures.

4. Superb Lubrication

Thanks to **SUPER HYRANDO SE-P**'s outstanding anti-wear performance, it prevents wear and boosts performances in today's high-pressure and high-performance hydraulic pumps and valves.

5. High Viscosity Index and Low Pour Point

SUPER HYRANDO SE-P has a high viscosity index, so its temperature-related viscosity change is low. As a result, it provides smooth operation across a wide range of temperatures.

6. Excellent Shear Stability

SUPER HYRANDO SE-P possesses excellent shear stability, so it undergoes almost no drop in viscosity even when used for long periods of time.

● Handling requirements for liquids (flash point:250°C min.) under Japan's Fire Service Law

1. Under the Fire Service Law, when liquids (flash point:250 °C min.) are stored together with hazardous materials, they must be kept at least one meter apart.
2. In quantities of 2 kL and above, liquids (flash point:250 °C min.) are considered "Designated Hazardous Materials" and are subject to municipal regulations (in Japan); be sure to familiarize yourself with rules and regulations in your area.

● APPLICATIONS

SUPER HYRANDO SE-P can be used in a wide range of low- to high-pressure hydraulic machineries including forging presses, metal-working machines, injection molding machines, extruders, machine tools, construction machinery, marine deck equipment, cargo handling machinery, mining machinery and many others.

● SHIPPING CONTAINERS

200-liter drums and 20-liter cans.

● TYPICAL PROPERTIES OF SUPER HYRANDO SE-P

ISO Viscosity grade	32	46	56*	68
Color(ASTM)	L0.5	L0.5	L0.5	L0.5
Density(15°C) g/cm ³	0.844	0.852	0.858	0.868
Viscosity(40°C) mm ² /s	34.0	43.5	55.8	66.7
Viscosity (100°C) mm ² /s	6.43	7.21	8.29	9.18
Viscosity index	144	128	121	114
Flash point (COC) °C	256	264	266	272
Pour point °C	-35	-30	-30	-30
Acid number mgKOH/g	0.06	0.06	0.06	0.06
Copper corrosion (100°C, 3 h)	1	1	1	1
Rust test (artificial sea water, 24 h)	No rust	No rust	No rust	No rust

*Viscosity grade 56 is a special grade which is not included in the ISO viscosity grades.

Note: The typical properties may be changed without notice. (July 2016)



Handling Precautions

▼ Follow these precautions when handling this product.

Composition :	Base Oil, Additives
Precautionary pictograms:	Not applicable
Signal word:	Not applicable
Hazard Statement:	Not applicable
Precautionary Statements:	<ul style="list-style-type: none"> • Do not handle until all safety precautions have been read and understood. • Wear protective gloves/protective clothing/eye protection/face protection. • Do not allow the eyes to become exposed to the product. Do not swallow the product. • Wash hands thoroughly after handling. • Do not eat, drink or smoke when using this product.
Response	<ul style="list-style-type: none"> • IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. • IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. • If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician. • IF ON SKIN: Wash with plenty of soap and water.
Storage	<ul style="list-style-type: none"> • The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight. • Containers that have been opened must be tightly sealed.
Disposal	<ul style="list-style-type: none"> • Dispose of contents/container in accordance with local/regional/national/international regulations. • If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage.