SUPER HYRANDO SE

Energy-Saving Antiwear Sludgeless Hydraulic Fluid

SUPER HYRANDO SE is a hydraulic fluid blended with friction modifier additives, which provides much better energy-saving performance than conventional mineral-oil-based hydraulic fluids. It is suitable for various types of hydraulic pumps and motors in a wide range operating pressures from low to high.

SUPER HYRANDO SE is also blended with highly refined base oil and new ashless additives that prevent sludge formation and ensure longer fluid life. In addition to its excellent antiwear performance, **SUPER HYRANDO SE** also has good seizure prevention performance for withstanding shock loads.

● SPECIAL FEATURES

1. Excellent Energy-Saving Performance

SUPER HYRANDO SE 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** can consume less electricity than systems that use conventional hydraulic fluids.

2. Outstanding Oxidation and Thermal Stability

Because **SUPER HYRANDO SE** 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 without replacement even at high temperatures and pressures.

3. Superb Lubrication

Thanks to the outstanding anti-wear performance of **SUPER HYRANDO SE**, it prevents wear in today's high-pressure, high-performance hydraulic pumps and valves, and get great performance out of them.

4. High Viscosity Index and Low Pour Point

SUPER HYRANDO SE has a high viscosity index, so its viscosity changes little when the temperature changes. As a result, it provides smooth operation across a wide range of temperatures.

5. Excellent Shear Stability

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

● GRADES

The optimal viscosity of fluids to be used in hydraulic equipment depends on the hydraulic pump type and the operating conditions. You should choose a hydraulic fluid according to the viscosity specified by the pump manufacturer.

SUPER HYRANDO SE is available in five viscosity grades from low to high, so you can choose the grade suitable for the operating conditions.

● APPLICATIONS

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

● CONTAINERS

200-liter drum and 20-liter can

● TYPICAL PROPERTIES OF SUPER HYRANDO SE

Viscosity grade		22	32	46	56	68
Color (ASTM)		L0.5	L0.5	L0.5	L0.5	L0.5
Density (15°C)	g/cm^3	0.837	0.843	0.850	0.857	0.866
Kinematic viscosity (40°C)	mm^2/s	21.6	32.3	43.9	54.8	65.1
Kinematic viscosity (100°C)	mm^2/s	4.59	6.05	7.39	8.40	9.11
Viscosity index		131	136	133	126	116
Flash point (COC)	°C	222	230	258	263	260
Pour point	°C	-40.0	-42.5	-35.0	-32.5	-30.0
Acid number	mgKOH/g	0.05	0.05	0.06	0.06	0.05
Copper strip corrosion (100°C, 3 h)		1	1	1	1	1
Rust prevention (artificial seawater, 24 h)		No rust	No rust	No rust	No rust	No rust

Notes

(1) Viscosity grade 56 is a special grade which is not included in the ISO viscosity grades.

(2) Note: The typical properties may be changed without notice. (May 2024)

Handling Precautions

▼ **Follow these precautions when handling this product.**

SUPER HYRANDO SE 22

Composition :	Base Oil (s), Additives
Hazard pictograms:	
Signal word:	Danger
Hazard Statement:	May be fatal if swallowed and enters airways
Precautionary Statements: **Prevention**	・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	・IF SWALLOWED: Immediately call a POISON CENTER/doctor. ・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. ・Do NOT induce vomiting.
Storage	・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. ・Store locked up.
Disposal	・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.

SUPER HYRANDO SE 32, 46, 56, 68

Composition :	Base Oil(s), Additives
Hazard pictograms:	Not applicable
Signal word:	Not applicable
Hazard Statement:	Not applicable
Precautionary Statements: **Prevention**	・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	・IF SWALLOWED: Immediately call a POISON CENTER/doctor. ・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	・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	・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.