

# HYRANDO JINEN TX

## Biodegradable Flame-retardant Hydraulic Fluid

In construction machines and hydraulic machineries used in the sea, a river, a lake, there is a risk that the environment will be polluted due to leaks of hydraulic fluid or the spraying of fluid from ruptured equipment. A very effective method to eliminate the pollution risk and to improve work safety is to adopt a biodegradable hydraulic fluid. **HYRAND JINEN TX**, which is formulated with fatty acid esters as base oil, provides superior biodegradability. Also, it can be used as a flame-retardant hydraulic fluid due to its high flash point and fire point.

### ● Special Features

#### 1. Excellent Biodegradability

With the OECD301B for testing the biodegradability of chemical substances, a biodegradation rate of over 60% is considered to have biodegradability. The biodegradability of **HYRANDO JINEN TX** is more than 60%, and is registered as eco mark product.

#### 2. Good Flame-Retardant Property

**HYRAND JINEN TX** has higher flash point and fire point compared with mineral oil, because its base oil is synthetic fatty acid esters, and provides good flame-retardant property.

#### 3. Superior Oxidation Stability

Because **HYRAND JINEN TX** is formulated with synthetic ester and high performance anti-oxidant, it has superior oxidation stability compared with conventional ester type hydraulic fluid. It produces extremely little sludge in pumps, valves, filters or other devices for long periods.

#### 4. Excellent Lubrication and Wear Resistance

Thanks to the outstanding oiliness of its base oil and the effects of its carefully selected additives, **HYRAND JINEN TX** possesses superb lubricity. As a result, it provides excellent durability even with pumps, valves, and other hydraulic devices that are used under very severe conditions.

#### 5. Good Viscosity-Temperature Property

**HYRAND JINEN TX**, which has high viscosity index and low pour point, provides stable lubricity performance across a wide range of temperatures.

#### 6. Excellent Rust Prevention

**HYRAND JINEN TX**, which is formulated with a high performance rust inhibitor, delivers excellent rust protection from existing water in hydraulic instruments.

#### 7. Good Compatibility with Metals

Since **HYRAND JINEN TX** has good compatibility with metal materials, it does not affect the materials of hydraulic equipment such as pumps and valves.

#### 8. Good Compatibility with Seal Materials

**HYRAND JINEN TX**'s compatibility with seal materials is nearly the same as that of mineral oil based anti-wear hydraulic fluids.

### ● Applications

- (1) Construction machinery (hydraulic shovel et al.)
- (2) Hydraulic devices in continuous casting machines and other steelmaking equipment
- (3) Hydraulic devices of electric and heating furnace
- (4) Die cast machines, forging presses, hydraulic presses
- (5) Hydraulic facilities which have high risk of environmental pollution and the fire by the leak of the oil

### ● Containers

200-liter drums and 20-liter cans

## ● Typical Properties of HYRANDO JINEN TX


ISO VG			46	56
Appearance			Light yellow, Liquid	Light yellow, Liquid
Color	(ASTM)		L1.0	L1.0
Density	(15 °C)	g/cm <sup>3</sup>	0.921	0.920
Kinematic viscosity	(40 °C)	mm <sup>2</sup> /s	46.8	51.4
	(100 °C)	mm <sup>2</sup> /s	9.37	10.3
Viscosity index			189	194
Flash point	(COC)	°C	312	310
Fire point		°C	368	368
Pour point		°C	-37.5	-27.5
Acid number		mgKOH/g	0.25	0.30
Rust test (artificial sea water, 24 h)			Pass(No rust)	Pass(No rust)
Biodegradability(OECD301B)		%	> 60	> 60

Note: The typical properties may be changed without notice. (April 2014)



## Handling Precautions

▼ Follow these precautions when handling this product.

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