

# HS Trans N

## Electrical insulating oil

**HS Trans N** is a paraffinic electric insulating oil. It improves electrical properties due to hydrodewaxing and hydrorefining raw materials, and has excellent antioxidant performance. **HS Trans N** is delivered to a large number of domestic electric equipment manufacturers and electric power companies in large quantities. It is also widely used overseas as insulating oil for transformers for export.

### ● Special Features

#### 1. High Dielectric Breakdown Voltage (Dielectric Strength)

A high dielectric breakdown voltage is one of the most important properties in insulating oil. The JIS standards require a value of 30kV or higher, which is normally considered sufficient. Strict quality control system enables us to ship **HS Trans N** with a dielectric breakdown voltage of over 50 kV.

The dielectric strength can be affected easily by the measuring instruments, measuring operations, environment, etc., so low levels are sometimes recorded. It is important to test the oil properly according to the JIS method and to make sure that the oil is free of dirt, moisture, and other impurities.

#### 2. Outstanding Oxidation Stability

Insulating oil that has been sealed inside a transformer for a long period of time gradually undergoes oxidation. The acids, sludge, and moisture that form as a result can inhibit the performance of the transformer. Therefore it is important to choose stable insulating oil that resists oil degradation.

**HS Trans N** is manufactured from carefully selected crude oil based on JXTG Nippon Oil & Energy Corporation's extensive experience and technology. As a result, it resists sludge formation and can be used safely for long periods.

#### 3. Superior Cooling Properties

Insulating oils with high specific heat and thermal conductivity provide the greatest cooling effect. However, there is little variation among oils in these properties, so the major contributor to the cooling effect is the oil's convection. Hence, low-viscosity oils provide the most effective cooling.

**HS Trans N** is designed with the lowest possible viscosity necessary to ensure an adequate flash point and

low evaporation, so it provides excellent cooling properties. Moreover, it makes early sedimentation of carbon particles formed when electrical current is interrupted in the circuit breaker.

### ● Applications

For high pressure large-capacity transformers, regular transformers and oil-filled circuit breakers

※ JIS C 2320 Class 1, No. 4 is upward compatible with JIS C 2320 Class 1, No. 2 and it can be used as JIS C 2320 Class 1, No. 2.

### ● Containers

Tank trucks, 200-liter drums and 18-liter cans

### ● Typical properties of HS Trans N

JIS C 2320		Class 1, No.4
Density (15°C)	kg/l	0.870
Viscosity (40°C)	mm <sup>2</sup> /s	8.08
	(100°C)	mm <sup>2</sup> /s
Flash point (PM)	°C	150
Pour point	°C	-32.5
Acid number	mg KOH/g	0.00
Corrosivity (140°C, 19 h)		Non corrosive
Oxidation stability (120°C, 75 h)		
Sludge	mass%	0.05
Acid number	mg KOH/g	0.18
Breakdown voltage	kV	75
Dielectric tangent (80°C)	%	≦0.01
Volume resistivity (80°C)	T Ω · m	50

Note: The typical properties may be changed without a notice ((Oct. 2018)



## Handling Precautions

▼ Follow these precautions when handling petroleum products.

<b>Composition :</b>	Highly refined mineral oil
<b>Precautionary pictograms:</b>	
<b>Signal word:</b>	Danger
<b>Hazard Statement:</b>	May be fatal if swallowed and enters airways
<b>Precautionary Statements:</b> <b>Prevention</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>• 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><li>• Do NOT induce vomiting.</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><li>• Store locked up.</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>