

# HV Insulating Oil A

## Electrical insulating oil

**HV Insulating Oil A** is a paraffinic electric insulating oil. It improves electrical properties due to hydro dewaxing and hydro refining raw materials, and has excellent antioxidant performance. **HV Insulating Oil A** 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 filled in transformers to be exported from Japan.

### ● 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 **HV Insulating Oil A** with a dielectric breakdown voltage of over 40 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.

**HV Insulating Oil A** is a long-term stable insulating oil manufactured using our extensive know-how in the production of paraffin-based insulating oils.

#### 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.

**HV Insulating Oil A** is designed with the lowest possible viscosity necessary to ensure an adequate flash

point and low evaporation, so it provides excellent cooling properties.

### ● Applications

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

### ● Containers

Tank truck, 200-liter drum and 18-liter can

### ● Typical properties of HV Insulating Oil A


JIS C 2320		Class 1, No.4
Density (15°C)	kg/l	0.870
Kinematic viscosity (40°C)	mm <sup>2</sup> /s	8.09
	(100°C) mm <sup>2</sup> /s	2.21
Flash point (PM)	°C	150
Pour point	°C	-32.5
Acid number	mg KOH/g	0.00
Corrosivity sulfur (140°C, 19 h)		Non corrosive
Oxidation stability (120°C, 75 h)		
Sludge	mass%	0.05
Acid number	mg KOH/g	0.17
Dielectric breakdown voltage	kV	70
Dielectric tangent (80°C)	%	below 0.01
Volume resistivity (80°C)	TΩ·m	45
Benzotriazole	mg/kg	10

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



## Handling Precautions

▼ Follow these precautions when handling petroleum products.

<b>Composition :</b>	Base Oil (s), Additives
<b>Hazard pictograms:</b>	
<b>Signal word:</b>	Danger
<b>Hazard Statement:</b>	May be fatal if swallowed and enters airways
<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>• 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/doctor.</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>