

## Hyrax Hypertrans HR Transformer Oil (IEC 60296: 2012)

### Product Description:

**Hyrax Hypertrans HR** transformer oil is a premium inhibited mineral insulating oil made from a severely hydrotreated wax-free naphthenic oil which is good as a dielectric and coolant. It has very good low temperature fluidity, high flash point and high chemical stability.

### Features and Benefits:

**Hyrax Hypertrans HR** is manufactured from carefully selected naphthenic base stock that provides cooling, insulating and arc quenching properties while meeting the requirements defined in IEC 60296:2012.

Its inherent cooling, enhanced chemical stability and high sludge solubilizing effects provides excellent performance in transformers, switchgears, capacitors and other liquid filled electrical equipments. It features:

- Excellent impulse strength
- Excellent oxidation stability
- Low dissipation power factor (power factor)
- Low static charging tendency
- Non carcinogenic & PCB free

### Specification:

**Hyrax Hypertrans HR** transformer oil meets or exceeds the following specifications:

- IEC 60296 : 2012 (Inhibited)

### Packages Sizes

- Available in bulk and 209L Steel Drums

Supply is also tailored to meet customers' requirement

### Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for applications referred to above and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contact office. This product should not be used for purpose other than the applications referred to above. If disposing of used product, take care to protect the environment, follow the local rules and regulations of your local Authority.

Hyrax Oil Sdn Bhd

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## Typical Characteristics

PROPERTY	TEST METHOD	SPECIFICATION		VALUES
		Min	Max	
<b>Function</b>				
Viscosity, cSt at 40 °C	ISO 3104		12	9.05
Viscosity, cSt at -30° C	ISO 3104		1800	1214
Pour Point, °C	ISO 3016		-40	-57
Water Content, PPM	IEC 60814		30 / 40*	20
Breakdown Voltage , kV	IEC 60156	30 / 70**		70
Density at 20°C, g/ml	ISO 12185		0.895	0.881
DDF at 90° C	IEC 60247		0.005	0.0009
<b>Refining /Stability</b>				
Appearance	Visual	Clear & Bright		Clear & Bright
Acidity, mgKOH/g	IEC 6201-1 /2		0.01	0.005
Interfacial Tension, dynes /cm	ASTM D 971	No general requirement		47
Total Sulfur Content	IP 373	No general requirement		No general requirement
Corrosive Sulfur	DIN 51353	Non Corrosive		Non Corrosive
Potentially Corrosive Sulfur	IEC 62535	Non Corrosive		Non Corrosive
DBDS	IEC 62697-1	Not Detectable (<5mg/kg)		Not Detectable
Inhibitors of IEC 60666	IEC 60666		0.4	0.36
Metal Passivator Additives	IEC 60666	Not Detectable (<5mg/kg)		Not Detectable
2-Furfural Content, mg/kg	IEC 61198	Not Detectable (<0.05mg/kg)		Not Detectable
Other Additive		See <sup>a</sup>		
<b>Performance</b>				
Oxidation Stability at 120 °C, 500 hrs	IEC 61125 C			
Total Acidity, mg KOH/g			0.30	0.10
Sludge, %			0.05	<0.03
DDF at 90°C			0.05	0.02
<b>Health, Safety and Environment (HSE)</b>				
Flash Point, °C	ISO 2719	135		145
PCA Content, %	BS 2000 Part 346		3	< 3
PCB Content, mg/kg	IEC 61619	Not Detectable (<2mg/kg)		Not Detectable

**Remark :** \*30 PPM - Bulk Delivery / 40 PPM- Drum Delivery

\*\*30 kV - Before Treatment / 70 kV- After Treatment

<sup>a</sup> As per IEC 60296:2012, this product contains no undeclared additives

**Note:** All information supplied by or on behalf of Hyrax Oil in relation to its products, whether in the nature of data, recommendations or otherwise, is supported by rigorous laboratory work and research and believed to be reliable. Typical test data are average values only. Minor variations to typical properties not affecting the performance of the product are to be expected in normal manufacturing circumstances.

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