

Oak ADV 1601

High performance – vegetable fluid for transformer

Oak ADV 1601 is a vegetable dielectric fluid based on palm, of totally renewable origin, with excellent insulating and thermal characteristics and also, by its nature, it is biodegradable, does not contain toxic substances, petroleum derivatives, halogens, silicones, nor any element that may affect the environment.

Its insulating capacity, measured as dielectric strength, far exceeds the values obtained with a mineral oil, even under adverse humidity conditions.

Typical Characteristics

Measurement	Unit	Typical value
Visual Appearance		Clear liquid
Density @ 20°C	g/ml	0.920
Kinematic viscosity @ 40°C	mm ² /s	40
Kinematic viscosity @ 100°C	mm ² /s	11
Dielectric Strength kV	kV	44
Dielectric Strength at 1mm kV	kV	25
Dielectric Strength at 2mm kV	kV	42
Dielectric Strength kV/min	kV/min	135
Power Factor at 25°C	%	0.140
Power Factor at 100°C	%	3.60
Acid index	mg KOH/g	0.03
Inflammation Point	°C	310
Flash point (COC)	°C	286
Freezing point	°C	-9.0
Color		0.5
Tendency to Gasification	µL/min	-0.90
Sulfur Corrosion		Non-Corrosive
Water Content	ppm	160
PCB's	ppm	Not detectable

Features and benefits

Features	Benefit
Biodegradability	Compliance with local environmental regulation
High viscosity index	Temperature stability
High flash point	Safer operation
High renewability content	Reduced impact on limited natural resources

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Application

The characteristics of Oak ADV 1601 make it an ideal product to be added as an insulator and refrigerant for distribution or power transformers, with the main advantage of being a biodegradable product and totally friendly to the environment.

Due to its low risk of fire and/or explosion, it is also highly recommended for equipment that must be installed in urban areas, hospitals, shopping centers, in addition to reducing assembly, installation and maintenance costs and increasing the safety of workers and the community.

Characteristics

Due to their high points of ignition and combustion, transformers or equipment with vegetable oil isolation are much safer in indoor use, in industries where the risk of fire is high or in confined spaces in general, which means that the cost of substations and associated civil works is lower, since special fire protection measures will not be necessary.

Oak ADV 1601 oil is manufactured from refined and refracted palm oils under strict process conditions to obtain a product with quality standards that fully comply with the requirements of the ASTM D-6871 standard, which establishes the conditions that must comply with a natural ester or a vegetable oil for use in electrical equipment.

Control and precautions

The product is delivered with its different properties duly certified according to the result they released at the time of manufacture. However, due to the highly hygroscopic nature of the product, it is recommended to check the humidity at the time of use, since handling without proper control can change this characteristic.

As its manipulation may involve an eventual contact with the skin with reactions that can vary from one individual to another, it is necessary to wear neoprene protective gloves, as well as protective lenses in case of splashes.



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Sales and technical support

With experience working with lubricant industry formulators, Oak Chemicals technical specialists are able to offer expertise and support in selecting the most effective products for your application. For further or advice, please contact your local Oak Chemicals sales office, visit our website www.oakchemicals.com or email management@oakchemicals.com.

For complete safety, health, personnel protection and first aid information, refer to the Material Safety Data Sheet (MSDS) which can be requested by website or phone Oak Chemicals.

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