

PRODUCT DATA SHEET

U Plus Uninhibited Transformer Insulating Oil

DESCRIPTION

U plus transformer oil is severely refined hydrocracked / hydrotreated virgin, uninhibited mineral insulating oil with highest degree of purity and stability. ELECTROL[®]U plus is manufactured from judiciously selected blend of latest technology feed stocks.

CHARACTERISTICS

U plus offer several advantageous characteristics.

- Low pour point
- DBDS free
- PCB free
- Metal passivator & deactivator free
- Product is rigorously analysed and passes the corrosion test as per ASTM D 1275B, IEC 62535 & DIN 51353 method
- Low viscosity oil offering excellent heat transfer

APPLICATIONS

U plus is highly suitable for all ratings of

- Power transformers & Distribution transformers
- Circuit Breakers & Rectifiers
- Oil filled switches & Switchgears
- X-ray equipment

PERFORMANCE & BENEFITS

- Excellent heat transfer
- Reliable oxidation stability
- Excellent low temperature properties
- High dielectric strength

PACKING

U plus oil is offered in 200-210 litre steel drums & in bulk in Flexi bags or ISO tanks. Within India, U plus oils are delivered through a company owned dedicated road tankers.

STORAGE PRECAUTIONS

Extreme care is taken while packing these products including filling of drums in an inert atmosphere. As electrical insulating oils / transformer oils are very sensitive to very minute concentrations of contaminants such as moisture, particulate matter, fibers, etc. Hence, care should be taken to store oils in a clean and dry condition. It is strongly recommended that all storage tanks / drums be maintained such that oil should not be in contact with atmospheric air. Also, oils should always be stored indoors in climatic controlled environment.

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PROPERTY	UNIT	TEST METHOD	SPECIFICATION LIMITS		TYPICAL DATA
			MIN	MAX	
1 - Function					
Viscosity at 40 °C	mm²/s	ISO 3104		12.0	10
Viscosity at -30 °C	mm²/s			1800	380
Pour point	°C	ISO 3016		-40	- 42
Water content, bulk/drums or IBC	mg/kg	IEC 60814		30/40	12
Break down voltage		IEC 60156			
- As delivered	kV		30		60
- After treatment	kV		70		> 70
Density at 20 °C	g/ml	ISO 3675 or ISO 12185 or ASTM D 7042		0.895	0.835
DDF at 90 °C		IEC 60247 or IEC 61620		0.005	0.00048
2 - Refining/Stability					
Colour		ISO 2049		1.5	Less than 0.5
Appearance		---	Clear, free from sediment & suspended matter		Clear, free from sediment & suspended matter
Acidity	mg KOH/g	IEC 62021		0.01	< 0.01
Interfacial tension	mN/m	IEC 62961 or ASTM D 971	40		46
Corrosive Sulphur	---	DIN 51353	Not corrosive		Not corrosive
Potentially corrosive Sulphur	---	IEC 62535	Not corrosive		Not corrosive
DBDS	mg/kg	IEC 62697-1	Not detectable (< 5)		Not detectable
Inhibitors of IEC 60666	%	IEC 60666	Not detectable (<0.01)		Not detectable
Metal passivator additives of IEC 60666	mg/kg		Not detectable (< 5)		Not detectable
Other additives*			None		None
2-Furfural and related compounds content	mg/kg	IEC 61198	Not detectable (<0.05) for each individual compound		Not detectable
3 - Performance					
Oxidation stability at 120 °C, 164 h		IEC 61125			
-Total acidity	mg KOH/g	4.8.4 of IEC 61125:2018		1.2	0.24
- Sludge	%	4.8.1 of IEC 61125:2018		0.8	0.10
- DDF at 90°C	---	4.8.5 of IEC 61125:2018		0.5	0.015
4 - Health, safety and environment (HSE)*					
Flash point, (PMCC)	°C	ISO 2719	135		150
PCA content	%	IP 346		3.00	0.9
PCB content	mg/Kg	IEC 61619	Not detectable (< 2)		Not detectable
* U plus is a uninhibited insulating oil, meeting IEC 60296 Ed 5.0 (2020) Type-B, TVBU.					

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*This product does not contains undeclared additives.

Note: Refer the safety data sheet for safety and handling guidelines for this product