



INDUSTRIAL
LUBRICANTS &
SERVICES LIMITED

Technical Data sheet

TF Fluid Regen

Regenerated Transformer Fluid

Description

A High quality regenerated Napthenic oil based Transformer fluid meeting BS 148:1997 Class I&II.

Approved for use by Transpower NZ

This product is supplied as an **inhibited** Transformer fluid.

Designed for use as an insulating and cooling oil to fill air gaps, dissipate heat and insulate windings

Applications

TF Fluid Regen is suitable for use in:

- transformers
- electrical switchgear
- circuit breakers
- capacitors

Benefits

- High dielectric strength and low power-loss
- Good oxidation resistance
- Excellent cooling properties
- Good thermal stability
- High purity and high flash point
- Low sludge formation
- Environmentally beneficial carbon credits

Product Specification BS 148:1997 Class I&II

Parameter	Units	Test Method	Uninhibited	BS 148 1997	
			Typical	Min	Max
Density @ 20°C	g/ml	IP 160	0.885		0.895
Closed Flash Point (PMCC)	°C	BS EN 227	150	140	
Kinematic Viscosity @ 40°C	cSt	BS EN I 3104	11.8		16.5
Kinematic Viscosity @ -15°C	cSt	BS EN I 3104	267		800
Kinematic Viscosity @ -30°C	cSt	BS EN I 3104	1330		1800
Pour Point °C	°C	ISO 3016	-45		-45
Acidity (CI)	mgKOH/g	BS 2000 Prt 1	<0.01		0.03
Acidity (CIA)	mgKOH/g	BS 2000 Prt 1	<0.01		0.08
Water Content					
Bulk Delivery	ppm	ASTM D4928	15		20
Drum Delivery	ppm	ASTM D4928	20		30
Antioxidant Content	%	IR	Nil		
Oxidation 164 hours (Class I/II)					
- Sludge	%mass	BS EN 61125	0.4		0.8
- Acidity	mgKOH/g	BS EN 61125	0.8		1.2
Oxidation 164 hours (Class IA/IIA)					
- Sludge	% mass	BS EN 61125			0.01
- Acidity	mgKOH/g	BS EN 61125			0.25
Oxidation 500 hours (Class IA/IIA)					
- Sludge	% mass	BS EN 61125			1.0
- Acidity	mgKOH/g	BS EN 61125			1.5
Breakdown voltage					
- Batch result	kV/CM	BS EN 60156	75	30	
- Delivered result	kV/CM	BS EN 60156	60	30	
Dielectric dissipation factor					
- @ 20°C - 50HZ		BS 5737	0.0001		0.005
- @ 90°C - 50HZ		BS 5737	0.0020		
Resistivity					
- @ 20°C	G ohm m	BS 5737	9500	200	
- @ 90°C	G ohm m	BS 5737	220		
Interfacial tension @ 25°C	dyne/cm	ASTM D971	45		
Corrosive Sulphur		BS5680	Non corrosive		Non corrosive
Corrosive Sulphur		ASTM D1275B	Non corrosive		Non corrosive
Appearance			Clear & bright	Pass	
Colour		ASTM D1500	1.0		
Carbon type		BS 2000 P346			
- Cn			46		
- Cp			44		
- Ca			10		
Total PCB Content	µg/g		Not detectable		Not detectable
PCA Content	% mass		1.9		3.0

**As per IEC 60296:2003 Article 5.4C, this product contains no undeclared additives
Product conforms to the testing requirements of IEC 60296**