

Shell Diala Oil GX

High performance insulating oil



Shell Diala GX is a top-tier inhibited insulating oil manufactured from specially refined high naphthenic feedstock. It offers very high oxidation stability, good dielectric strength, gas absorbing behaviour and excellent low temperature properties without the use of pour point depressants.

Applications

- **Industrial transformers**
Electrical insulating oil for transformers and switch-gears.
Grid and Industrial transformers up to maximum load.
- **Electrical equipment**
Components like rectifiers, circuit breakers, switch-gears.

Advice on applications not covered in this leaflet may be obtained from your Shell Representative.

Performance Features and Advantages

- **Gas absorbing properties**
Diala GX is providing gas absorbing performance in transformers running under very high voltage and electrical stress. That makes it particular suitable in biggest power plant transformers of any size and load.
- **Excellent oxidation stability**
Diala GX is offering inherent resistance to oil degradation. A proven anti-oxidant inhibitor enables outstanding product life.
It is designed to perform as fill-for-life oil filling in transformers.
- **Very good dielectric strength**
It clearly exceeds the requirements from all major specifications.
- **Very good low temperature properties**
The high naphthenic nature of the feedstock of Diala GX provides a superior low temperature performance without adding any additives.
- **Very good heat transfer characteristics**
The very good fluidity of the oil is securing a proper heat transfer inside the transformer even from lowest starting temperatures on.

Specification and Approvals

Shell Diala GX meets the following specifications:

DIN 57370-1	
VDE 0370 Part 1	Class A
IEC 296	Class IIA
BS 148-98	Class IIA

Storage precautions

The critical electrical properties of Shell Diala GX are easily compromised by trace contamination with foreign material. Typically encountered contaminants include moisture, particles, fibers and surfactants. Therefore, it is imperative that electrical insulating oils be kept clean and dry. It is strongly recommended that storage containers be dedicated for electrical service and include air-tight seals. It is further recommended that electrical insulating oils be stored indoors in climate-controlled environments.

Health and Safety

Guidance on Health and Safety are available on the appropriate Material Safety Data Sheet which can be obtained from your Shell representative.

Shell Diala GX is free of polychlorinated byphenyls (PCB).

Protect the environment

Take used oil to an authorized collection point. Do not discharge into drains, soil or water.

Typical Physical Characteristics

Diala GX			Shell Diala GX
Appearance		DIN 57370	bright and clear
Density		ISO 3675	
at 15°C	kg/m ³		889
at 20°C	kg/m ³		886
Kinematic viscosity		DIN 51562-1	
at 20°C	mm ² /s		19
at -30°C	mm ² /s		1100
Flashpoint P.M.	°C	ISO 2719 / ASTM D93	136
Pourpoint	°C	ISO 3016	-60
Neutralisation value	mg KOH/g	DIN 51558-2	<0,03
Corrosive sulphur		DIN 51353	non-corrosive
Breakdown voltage		DIN EN 60156 / IEC 156	
(after treatment)	kV		>60
Dielectric dissipation factor at 90°C		DIN 57370 / IEC 247	
(after treatment)			0,001
Oxidation stability			
Baader (28 d/110°C)		DIN 51554	
Saponification value	mg KOH/g		0,1
Sludge content	%m		0,02
Dielectric dissipation factor at 90°C			0,01
Gassing tendency	mm ³ /min	IEC 628 A	-10

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.