SHELL DIALA S5 BD

A biodegradable transformer oil with excellent cold temperature performance, providing protection and efficiency to transformers across the globe.

SHELL
LUBRICANT SOLUTIONS

APPLICATIONS

Suitable for all types of power and distribution transformers.

Particularly well equipped for applications:

where biodegradability is required

in very cold or arctic climate conditions

READILY BIODEGRADABLE

Shell Diala S5 BD is the latest addition to the Shell Diala range of high-performance transformer oils. It is readily biodegradable, meaning it is suitable for environmentally sensitive locations that require safeguarding against spills. However, improving sustainability credentials does not mean a sacrifice on performance. In fact, Shell Diala S5 BD is specifically designed to deliver peak performance in transformers under increasing pressure from growing electricity demand. Excellent cooling and heat transfer properties enable superior system efficiency, while its formulation also provides robust resistance to oil ageing and degradation.

COLD TEMPERATURE PERFORMANCE

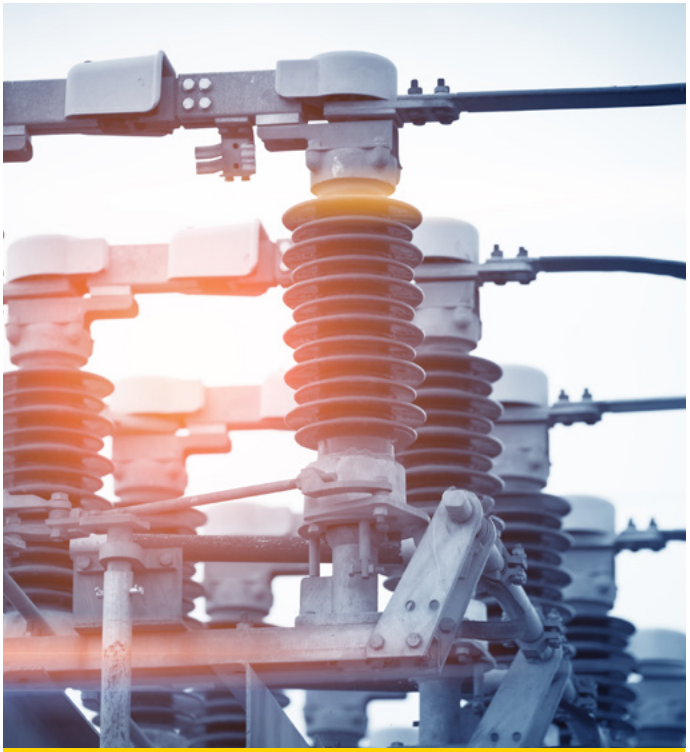
Transformers operate in high stress environments worldwide, but some of the toughest conditions exist in very cold or arctic climates where challenges for power professionals are aplenty. Shell Lubricant Solutions has developed Shell Diala S5 BD with a low viscosity, resulting in a pourpoint of -51°C, providing excellent cold temperature performance to help keep business in motion.

SPECIFICATIONS & APPROVALS

- IEC 60296
- OECD 301B Readily biodegradable

GTL TECHNOLOGY FORMULATION

Shell's GTL technology means Shell Diala S5 BD is virtually sulphur free and does not contain any hazardous substances such as polychlorinated biphenyl (PCB) and dibenzyldisulfide (DBDS). GTL base oils offer a high degree of compositional consistency and have an excellent response to antioxidants. They protect transformers from failure by reducing the risk of corrosive sulphur developing from the insulating oil.



FIND OUT MORE BY VISITING WWW.SHELL.COM/LUBRICANTS

CONSISTENT RELIABILITY

Shell Diala S5 BD's outstanding oxidation performance makes it suitable for use in a highly loaded application like transformers. The product's extended oil life means the transformer performance is maintained for a longer period. This reduces costly downtime, enhances operator control over maintenance practices, and enables equipment to work harder for longer.

OPERATIONAL SIMPLICITY

Shell Diala S5 BD is simple and easy to use. It is fully miscible and compatible with conventional mineral oils.

FULL PRODUCT & SERVICE PORTFOLIO

Whatever your needs or application, we can provide a full range of oils and greases, including synthetic, high-performance products and additional services, to help increase your operational efficiency and lower your total cost of ownership.

CONTACT

Talk to us about the benefits that GTL-based Shell Diala oils could have for your business.

TYPICAL PROPERTIES OF SHELL DIALA S5 BD

PROPERTIES		METHOD	IEC 60296, TYPE A MINIMUM	IEC 60296, TYPE A MAXIMUM	SHELL DIALA S5 BD TYPICAL
Appearance		IEC 60296	Clear, free from sediment and suspended matter	Clear, free from sediment and suspended matter	Complies
Density @20°C	kg/m³	ISO 3675		895	816
Kinematic Viscosity @ 100°C	mm²/s	ISO 3104			2.2
Kinematic Viscosity @ 40°C	mm²/s	ISO 3104		12	7.4
Kinematic Viscosity @ -20°C	mm²/s	ISO 3104			115
Kinematic Viscosity @ -30°C	mm²/s	ISO 3104		1 800	253
Kinematic Viscosity @ -40°C	mm²/s	IEC 61868			1 000
Flashpoint P.M.	°C	ISO 2719	135		161
Pour Point	°C	ISO 3016		-40	-51
Fire - Point	°C	ISO 2592			186
Acidity	mg KOH/g	IEC 62021-1		0.01	0.01
Corrosive Sulphur		DIN 51353		Not corrosive	Not corrosive
Total Sulphur Content	mg/kg	ASTM D5185		500	≤ 1
Potentially Corrosive Sulphur		IEC 62535		Not corrosive	Not corrosive
Breakdown Voltage Untreated	kV	IEC 60156	30		40
Breakdown Voltage After Treatment	kV	IEC 60156	70		75
Dielectric Dissipation Factor (DDF) @90°C		IEC 60247		0.005	0.001
Oxidation Stability 500h / 120°C		IEC 61125		High grade oil, Type A	
Total Acidity	mg KOH/g			0.3	0.02
Sludge	%m			0.05	0.005
Dielectric Dissipation Factor (DDF) @90°C				0.05	0.001
Water content (Drums/IBC)	mg/kg maximum	IEC 60814		40	14
Water content (Bulk)	mg/kg maximum	IEC 60814		30	14
2-Furfural and related compounds content	mg/kg	IEC 61198		Not detectable	Complies
Stray gassing under thermo-oxidative stress -Hydrogen (H2) -Methane (CH4) -Ethane (C2H6)		IEC 60296, procedure in Clause A.4 (oil saturated with air) in presence of copper		Non stray gassing < 50 µl/l < 50 µl/l < 50 µl/l	Complies
DBDS content		IEC 62697-1		Not detectable (< 5 mg/kg)	Complies
Metal passivator additives	mg/kg	IEC 60666		Not detectable	Complies
Oxidation inhibitor content (DBPC)	%m	IEC 60666			0.23
PCA Content	%m	IP346		3	Complies
PCB content	mg/kg	IEC 61619		Not detectable	Complies
Biodegradability	%	OECD 301B			Readily Biodegradable

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

*Sulphur content below 1ppm detection limit of ASTM D5185.

SHELL
LUBRICANT SOLUTIONS