## **PRODUCT DATA SHEET**



## GulfSea Diesel GF

Supreme performance, zinc-free and chlorine-free railroad diesel engine oils

### **Product Description**

**GulfSea Diesel GF** is supreme performance, zinc-free and chlorine-free oil specially designed to provide excellent engine cleanliness and oil filter life in the modern railroad diesel locomotive engines being employed in severe service. It is formulated with an additive package endorsed by engine manufacturers' and meets the requirements of newer diesel locomotive engines of General Electric (GE) and ElectroMotive Division (EMD) of General Motors. Though the newer engines consume significantly less oil and operate at higher temperatures, the excellent BN retention property and improved oxidation resistance of GulfSea Diesel GF provide superior service and facilitate extended drain intervals. It exceeds the performance requirements of Locomotive Maintenance Officers Association (LMOA) Generation 5 and API CF/CF-2 and is available in viscosity grade SAE 40.

### **Features & Benefits**

- Exceptional detergency/dispersancy providing excellent engine cleanliness, especially engine top decks.
- Excellent in-service retention of BN which facilitates extended drain intervals.
- High thermo-oxidative stability protects against sludge formation providing cleaner engines.
- Zinc-free formulation protects silver bearings against corrosion.
- Non-chlorinated additive package helps in reducing used oil disposal costs.

#### **Applications**

- Railroad diesel locomotive engines operating under severe conditions and specifying LMOA Generation 5 quality oils.
- Medium speed two-cycle and four-cycle railroad engines, including newer diesel locomotive engines of GE and EMD of General Motors.
- Marine and stationary engines for power generation or off-shore drilling requiring zinc-free oils.
- Detroit Diesel 149 series engines operating under severe conditions.
- Stationary engines requiring API CF and CF-2 quality oils.





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## **Typical Properties**

GulfSea Diesel GF		
SAE Grade		40
Meets the following Specifications		
LMOA Generation 5		X
API CF, CF-2		X
EMD of General Motors		X
GE as Generation 4 Long Life Oils		X
Typical Properties		
Test Parameters	ASTM Method	Typical Values
Viscosity @ 100 °C, cSt	D 445	15
Viscosity Index	D 2270	100
Flash Point, <sup>0</sup> C	D 92	246
Pour Point, <sup>0</sup> C	D 97	-18
BN, mg KOH/g	D 2896	17.3
Density @ 15 °C, Kg/I	D 1298	0.903
Sulphated Ash, wt%	D 874	1.96
Zinc, ppm	ICP < 10	<10

July 2014

