



## **Balmerol<sup>®</sup> Protoshakti Series**

Marine Diesel Engine Oil

Technical Data Sheet

#### **Product Description:**

Balmerol Protoshakti Series are premium grade marine engine oil designed for use in medium speed trunk piston diesel engines, operating on residual fuels having high sulphur content. Balmerol Protoshakti Series are formulated with selected base stocks and synergistic additive system comprising of highly overbased detergent, antioxidant, antiwear and antifoam additives.

#### Features & Benefits:

Balmerol Protoshakti Series provides the following benefits:

- It possesses excellent thermal and oxidation stability.
- High alkalinity reserves (TBN) in the oil ensures superior protection against corrosion from acidic by-products of combustion due to high sulphur fuels.
- Extends engine life by keeping crankcase and camshaft areas in clean condition.
- Reduces deposits on piston rings.
- Provides good Lube / Fuel compatibility.

#### **Applications / Recommendations:**

Balmerol Protoshakti Series are recommended for use in medium speed trunk piston diesel engines for power generation and main propulsion engines on deep sea vessels. It is also suitable for use in main propulsion engines on coastal and river ships. It is also recommended for application in the latest model high power two and four cycle diesel engines.





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### **Typical Properties:**

Balmerol Protoshakti Series				
Properties	Protoshakti 123	Protoshakti 124	Protoshakti 204	Protoshakti 404
Colour & Appearance	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright
SAE Grade	30	40	40	40
Kinematic Viscosity, cSt @ 100°C, ASTM D 445	11.3 - 12.5	13.0 - 15.3	13.0 - 15.3	13.0 - 15.3
Viscosity Index, ASTM D 2270	98	98	98	98
Pour Point, °C, ASTM D 97	-9	-9	-9	-9
Flash Point, COC, <sup>°</sup> C , ASTM D 92	238	238	238	238
TBN, mg KOH/gm, ASTM D 2896	12	12	20	40

#### Health and Safety:

Balmerol Protoshakti Series are not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. For MSDS please contact your local Balmer Lawrie Marketing / Technical Service team.

For Further Information, contact:

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