



BP Energol THN 77

Turbine Oil – Mil Spec Approved

Product Data

Description

Energol THN 77 is a high quality steam turbine oil uniquely formulated for use on naval surface vessels and submarines. The product meets specific performance requirements as per the mil standard and passes all health and safety assessments as required by the U.S. Navy.

Application

Energol THN 77 is recommended for use in main steam turbine bearings and reduction gears, as well as auxiliary turbines, certain hydraulic equipment, air compressors and general mechanical lubrication on naval surface vessels and submarines.

Main Performance Features

- Does not contain phenolic anti-oxidants.
- Chlorine and zinc free.
- Excellent demulsibility.
- Rust inhibited.
- High level of gear lubrication performance (FZG stage 10).
- High thermal and oxidation stability to prolong service life.
- Good anti-foam and air release properties.

Approvals

Energol THN 77 is fully approved by the U.S. Navy and has been tested against U.S. Mil Spec, MIL-PRF-17331H and MIL-PRF-17331J. Energol THN 77 may also be identified as Nato Symbol O-250, and Military Symbol 2190-TEP.

Care and Handling

It is recommended that when Energol THN 77 is used as a steam turbine oil, it is continuously centrifuged and filtered in accordance with the manufacturers' instructions.

Supplied in bulk, and drums of approximately 208 litres.

Where outdoor storage is unavoidable, drums should be covered.

The drums should be stored in such a way as to ensure they are not damaged and grade markings not obliterated; position them horizontally so as to prevent water collecting on drum ends.

Ensure drums are tightly re-sealed after use.



Typical Characteristics

		Test Method	Units	THN 77
Density	15 ^o C	IP 365	g/ml	0.883
Flash Point		ASTM D29	^o C	204 min
Air Release	50 ^o C	ASTM D3427	mins	13
Neutralisation Number		ASTM D974	mgKOH/g	0.3max
Mineral Acidity		ASTM D1093		Neutral
Kinematic Viscosity	4.4 ^o C	ASTM D445	mm ² s ⁻¹	830
Kinematic Viscosity	40 ^o C	ASTM D445	mm ² s ⁻¹	78.5
Kinematic Viscosity	100 ^o C	ASTM D445	mm ² s ⁻¹	9.5
Pour Point		ASTM D97	^o C	-9 min
Copper Corrosion	100 ^o C	ASTM D130		1b
FZG		DIN 51 354	Load stage	10
TOST Life to 2 mgKOH/g		ASTM D2272	Hours	>2000

The above figures are typical of those obtained with normal production tolerances, and do not constitute a specification.
Note 1 mm² s⁻¹ = 1 cSt.

Additional Information

Energol THN 77 is classified as non hazardous according to the criteria of NOHSC. However, in line with safe handling practices, it is recommended that the handling instructions outlined in the Castrol Material Safety Data Sheet be followed.

Energol THN 77 is classified as a C2 combustible liquid for storage and handling purposes. Store in a cool, dry, well-ventilated area out of direct sunlight. Avoid sparks, flames and other ignition sources. Store away from incompatible materials such as materials that support combustion (oxidising materials). Reference should be made to Australian Standard AS1940 - The storage and handling of flammable and combustible liquids.

Spillage: **SMALL - 20 LITRES OR LESS**
Soak up on Castrol Diatomaceous Earth or similar inert oil absorbent. Arrange for disposal through an approved facility.

LARGE - GREATER THAN 20 LITRES
Contain as soon as possible, remove by best means available and arrange recycling (preferred) or disposal through an approved facility.

Disposal: New or used material must not be allowed to enter the ground, ground water, water courses, sewers or drainage systems. Advice may be sought from the Environmental Protection Authority or from the local waste disposal authority.

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BP Australia Pty Limited, AIME, GPO Box 5222, Melbourne VIC 3001
Technical Advice Line 1300 139 700 / Customer Service 1300 1300 27
www.bp.com.au