

Technical Data Sheet





TURBINEPLUS SERIES

ZINC FREE PREMIUM TURBINE OILS

Product Description

TURBINEPLUS Series are Zinc-Free turbine lubricants specifically designed for use in gas and steam turbine applications. These lubricants are formulated with especially selected base-stocks and performance-based additives, such as antioxidants, rust and corrosion inhibitors and anti-foam agents providing outstanding resistance to oxidation and chemical degradation over time. TURBINEPLUS Series of lubricants exhibit excellent water separability, resistance to emulsion formation and anti-foaming characteristics which provide reliable operation. Their enhanced air release properties are critical for turbine hydraulic control mechanisms.

Applications

TURBINEPLUS Series are designed to meet the requirements of steam and gas turbines.

- Electric power generation for high output base load utilities.
- Hydroelectric turbine applications.
- Gas Turbine Combined Cycle Power Plants operating in base load or peak generation modes.
- Gas or steam turbine prime movers.
- Gas turbines in Captive Power plants.

Benefits

- Excellent oxidation, chemical and color stability.
- Rapid air release.
- Good resistance to foaming.
- Excellent water separability ability.
- Zinc Free.
- Goodrustandcorrosionprotection.



Typical Properties

PROPERTIES	TEST METHOD	TURBINEPLUS 32	TURBINEPLUS 46	TURBINEPLUS 68
ISO Viscosity Grade		32	46	68
Air Release, 50 C, min	ASTM D3427	2	3	4
Kinematic Viscosity @ 40 C, mm2/s,	ASTM D445	31	44	66
Kinematic Viscosity @ 100 C, mm2/s,	ASTM D445	5.6	6.9	8.8
Viscosity Index (min)	ASTM D 2270	110	110	110
Rust Test	ASTM D665	Pass	Pass	Pass
Flash Point, ⁰ C	ASTM D92	230	230	242
Pour Point, ⁰ C	ASTM D97	-30	-30	-30
Turbine Oil Stability Test, Life to 2.0 mg KOH/g, h,	ASTM D943	10000	10000	8000
Foam, Sequence I	ASTM D892	0/0	0/0	0/0
Foam, Sequence II	ASTM D892	0/0	0/0	0/0
Foam, Sequence III	ASTM D892	0/0	0/0	0/0

Available Packs: 5, 20, 50 and 210 Litres.

Shelf Life: 36 Months from manufacturing month.

^{*} All related specifications are meets or exceeds. Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly. The Material Safety Data Sheet (MSDS) are available upon request through our sales office.



Material Safety Data Sheet

PRODUCT AND COMPANY IDENTIFICATION

Product **TURBINEPLUS SERIES** Supplier PETRELPLUS INC.

One World Center, Tower One, 9th Floor, Senapati Bapat Marg, Lower Parel, Mumbai-400013, Maharashtra.

Call # +91 22 6216 7072 (Monday to Friday) Cell # +91 93522 25457 marketing@petrelplus.com www.petrelplus.com

COMPOSITION

No harmful substances. A composition of selective base oils and proprietary Additives.

HAZARDS INDENTIFICATION

-Flammable at high temperature. FIRE

HEALTH

Eye contact -May cause mild irritation to the eyes upon direct contact. Skin contact -Prolonged contact may defat the skin or can cause dermatitis.

-hazards. Inhalation

-Harmful if swallowed. Ingestion

FIRST-AID MEASURES

Inhalation -Remove person to fresh air. Seek medical help if discomfort persists.

-Do not induce vomiting. Seek medical support. Ingestion

Skin Contact -Immediately flush skin with plenty of water for at least 15 minutes.

-Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. **Eye Contact**

FIRE-FIGHTING METHODS

Extinguishing media -Use dry chemical powder or carbon di - oxide or foam. Special protective equipment -Positive pressure self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURE

-Adequate ventilation, gloves, goggles, overalls and boots. Personal protection

Environmental precautions -Avoid entry into water courses. Clean up method -Absorb on inert material.

STORAGE AND HANDLING

Handling -Impervious gloves & eye protection ensure good ventilation. Keepaway from source of ignition.

Storage -Store in a cool & dry place.

EXPOSURE CONTROL / PERSONAL PROTECTION

Respiratory protection -Not required under normal conditions. Skin/hand protection -Impervious gloves, overalls, and boots.

Eye protection -Use Goggles

TYPICAL PROPERTIES

ISO VG - 32 46 68 Flash Point, °C, - 230 230 242 Air Release 3 - 2 10000 8000 TOST - 10000



10. STABILITY AND REACTIVITY

Stability -Stable

Conditions to avoid -Excessive temperatures Materials to avoid -Strong oxidizers

Hazardous decomposition products -Oxides of carbon and nitrogen

11. TOXICOLOGICAL INFORMATION

Skin contact -Possible irritation Eye contact -Possible irritation Inhalation -Not applicable

Ingestion -Irritation. May cause lung damage.

Long term effect -Not known

12. ECOLOGICAL INFORMATION

Mobility - Mobile Degradation - Low Accumulation -Not expected Short- and Long-Term effect - Water pollutant

13. DISPOSAL CONSIDERATIONS

Dispose off according to local and National Regulations.

14. TRANSPORT INFOMRATION

CPL - Not applicable IMO -Not applicable

15. REGULATORY INFORMATION

Symbol(s) -Not applicable Phrase(s) - Not applicable Phrase(s) - Not applicable

16. OTHER INFORMATION: PRODUCT SAFETY

For safety reasons, it is IMPERATIVE that customer: -Ensure that all those within their control who use the products are supplied with all relevant information contained within the Material Safety Data Sheet and Technical Bulletin concerning the applications for which the product is designed and any instructions or warning.