

# PETRONAS JENTERAM G SERIES

## Premium Performance Ashless Industrial Turbine Oil

PETRONAS Jenteram G Series are premium performance turbine oils specially developed for use in modern steam, light and heavy-duty gas turbines, combined cycle turbines with or without associated gear boxes.

Formulated with high quality selected base oils enhanced with advanced zinc-free anti-wear, anti-oxidant, anti-rust and anti-foam additives, PETRONAS Jenteram G oils provide high anti-wear protection, very good varnish protection and excellent thermal and oxidation stability for up to 3x longer lasting performance\*.

PETRONAS Jenteram G Series meets or exceeds key industrial specifications and OEM requirements.

\*vs. minimum requirements of DIN 51515 Part II for industrial turbine fluids based on TOST results (ASTM D943)

### Applications

PETRONAS Jenteram G Series are recommended for use in:

- modern steam, light and heavy-duty gas turbines, combined cycle turbines with or without associated gear drives. It may also be used on auxiliary turbine equipment such as generators, compressors etc.
- Plain and rolling element bearings, slides, journals and lightly loaded gear drives where circulation oil is required
- turbine systems that require varnish control performance

### Features and Benefits

Features	Benefits
High anti-wear protection	Protects equipment components from excessive wear and provides longer equipment life
Excellent filterability	Maintains excellent filter efficiency and turbine system cleanliness which prevents sludge deposits
Excellent thermal and oxidation stability	Maintains performance levels under high temperatures and pressure, enabling long oil drain intervals
Very good varnish control	Protects equipment components, especially turbine control valves, extending equipment life.
Excellent rust & corrosion protection	Inhibits the corrosion process that occurs in presence of water, improving equipment life
High air release and foam stability	Maintains high efficiency in turbine systems and ensures smooth operation of the system due to rapid air release. Protects the system from air degenerative effects reducing maintenance costs

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Features	Benefits
High water separability	Due to high water separability the system is protected from water degenerative effects, maintaining turbine efficiency at required level and reducing maintenance costs
High multi metal compatibility	Compatible with most metal alloys ensuring trouble free performance of the system
High compatibility with most seal and elastomers	Compatible with most seals and elastomers, which prevents oil leaks and contamination due to seal erosion

### Typical Properties

Characteristic	Method	Specification	32	46	68
Specific Gravity @15°C	ASTM D 4052	Report	0,853	0,859	0,868
Kinematic Viscosity at 40°C, cSt	ASTM D 445	±10%	32	46	68
Kinematic Viscosity at 100°C, cSt	ASTM D 445	(1)	5,6	7,1	9,3
Viscosity Index	ASTM D 2270	Min. 90	114	113	114
Flash Point, °C	ASTM D 92	**	220	230	230
Pour Point, °C	ASTM D 97	Max. -6	-33	-33	-30
TAN, mgKOH/g	ASTM D 664	Report	0,05	0,05	0,05
FZG, Failure load stage	ISO 14635-1	Min. 8	11	12	12
Water Separability, 40/37/3 - mins	ASTM D 1401	(1)	5	15	20
Copper Strip Corrosion	ASTM D 130	Max. 2	1b	1b	1b
Foam Sequence I, mL	ASTM D 892	Max. 450/0	0/0	0/0	0/0
Foam Sequence II, mL		Max. 50/0	0/0	0/0	0/0
Foam Sequence III, mL		Max. 450/0	0/0	0/0	0/0
Air Release @50°C, mins.	ASTM D 3427	Max. 5	1,4	2,2	2,9
RPVOT, mins.	ASTM D 2272	Min. 1000	2650	2650	2650
TOST life, hrs.	ASTM D 943	Min. 3500	10500	10500	10500

All technical data are provided for reference only and all specification based on DIN 51515 Part II

\*\*Individual limits accordingly with each viscosity grade / (1): not required in specification / SS is available upon request including quality control limits /

Note: Cleanliness level is an important request from OEMs to guarantee a better performance and a long life of your turbine components. According to DIN 51515 Part II a cleanliness level 20/17/14 is considered as state of art, however each OEM has their own spec for that. In all system, the cleanliness required for your system shall be ensured by carefully filtering the pressure fluid during filling

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### Performance Levels

- ALSTOM HTGD 90117
- ASTM D-4304 Type I, II and III
- BRITISH STANDARD BS 489
- DIN 51515 Part I and II
- DIN 51524 Part I
- FIVES CINCINNATI P-38
- GB 11120-2011 L-TSA and L-TGA
- GENERAL ELECTRIC GEK-101941A
- GENERAL ELECTRIC GEK-32568K
- ISO 8068 L-TSA & L-TGA
- ISO 8068 L-TSE & L-TGE
- ISO 11158 HH and HL
- SIEMENS AG TLV 9013 05
- SIEMENS AG TLV 9013 04
- SIEMENS Std 65/0027 Issue 7 (2016)
- Solar ES 9224 Class II

### Health, Safety and Environment

This product is unlikely to present any significant health and safety hazards when used in the recommended application. Avoid contact with skin. Wash immediately with soap and water after skin contact. Do not discharge into drains, soil or water.

For further detail regarding storage, safe handling, and disposal of product, please refer to product SDS or contact us at: [www.pli-petronas.com](http://www.pli-petronas.com).

### Important Note

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