



CALTEX

PRODUCT BULLETIN



Vanguard®

Compounded Industrial Gear and Steam Cylinder Oil

Premium quality, high viscosity, industrial gear oil with low carbon residue, compounded with selected fatty oils together with rust and foam inhibitors. Also designed for steam cylinder and valve lubrication where the steam is wet or of poor quality.

APPLICATIONS

- Heavily loaded industrial worm gear sets
- Low speed, heavily loaded spur and helical gears
- Low speed or high temperature bearings
- Steam cylinder and valve lubrication where the steam is wet or of poor quality (see below):

ISO 460 Grade:

- Saturated steam applications at pressures in the range 700 to 1000 kPa (100 to 150 lbf/in²)

ISO 680 Grade:

- Poor quality steam at pressures up to 1000 kPa (150 lbf/in²)

ISO 1000 Grade:

- Superheated steam at pressures over 700 kPa (100 lbf/in²)
- Saturated steam at pressures over 1000 kPa (150 lbf/in²)
- Where oil-free exhaust steam is required

PERFORMANCE STANDARDS

- ANSI/AGMA 9005-D94
 - 7 Comp (ISO 460)
 - 8 Comp (ISO 680)
 - 8A Comp (ISO 1000)

ENVIRONMENT, HEALTH and SAFETY

Information is available on this product in the Caltex Material Safety Data Sheet (MSDS) and Caltex Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit www.caltexoils.com.

BENEFITS

★ Saves on maintenance and downtime

The excellent lubricity and wetability characteristics of the high viscosity mineral oil compounded with selected fatty oils provides high film strength to protect both worm gears, and steam cylinders and valves from wear. The effective inhibitor system protects components against rust and corrosion.

★ Trouble-free operation

The refined grade of fatty compounding material used in the formulation allows relatively easy separation from steam and condensate, compared with other compounded cylinder oils containing different types of fatty oils. Good atomizing properties enable the oil to be evenly distributed over the surfaces of the cylinder walls and piston rods for effective lubrication in the presence of steam. The anti-foam inhibitor ensures smooth delivery of lubricant to the working surfaces.

★ Long oil service life

The good oxidation and thermal stability of the refined fatty compounding material resist oil breakdown with heat.

KEY PROPERTIES

ISO Grade	460	680	1000
Carbon Residue, m%	0.6	1.4	1.6
Fatty Oil, m%	4.3	5.3	5.3
Flash Point, COC, °C	284	290	300
Pour Point, °C	-9	-3	0
Viscosity			
mm ² /s @ 40°C	460	680	1000
mm ² /s @ 100°C	30.9	38.0	47.5
Viscosity Index	97	92	90

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This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

Produced by ChevronTexaco Global Lubricants Solutions



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