



LUBRICANTS

AN HF SINCLAIR BRAND

TECH DATA

ENDURATEX™ SYNTHETIC EP

PREMIUM SYNTHETIC HEAVY DUTY INDUSTRIAL GEAR LUBRICANTS

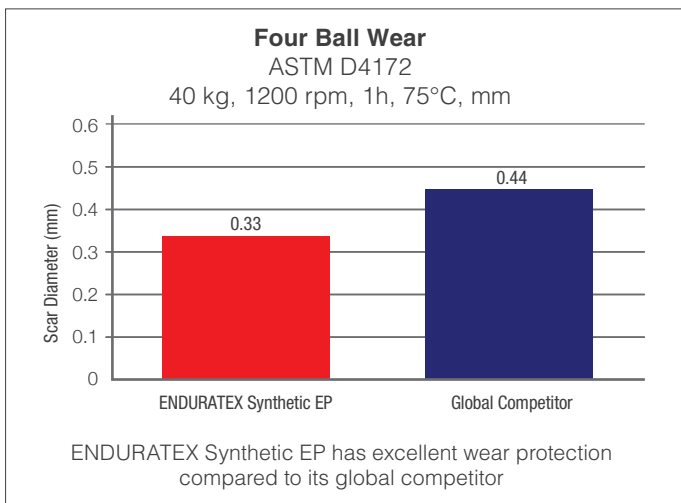
INTRODUCTION

Petro-Canada Lubricants ENDURATEX Synthetic EP gear oils are premium performance, extreme pressure lubricants designed for enclosed industrial gears and bearings operating under severe load conditions and in extreme temperatures. ENDURATEX Synthetic EP is formulated using synthetic PAO base oils and specially selected additive technologies to deliver excellent wear properties, outstanding micropitting protection and exceptional extreme temperature performance for extended component and fluid life. ENDURATEX Synthetic EP enhances gear box efficiency over a wide temperature range and can reduce power consumption.

FEATURES AND BENEFITS

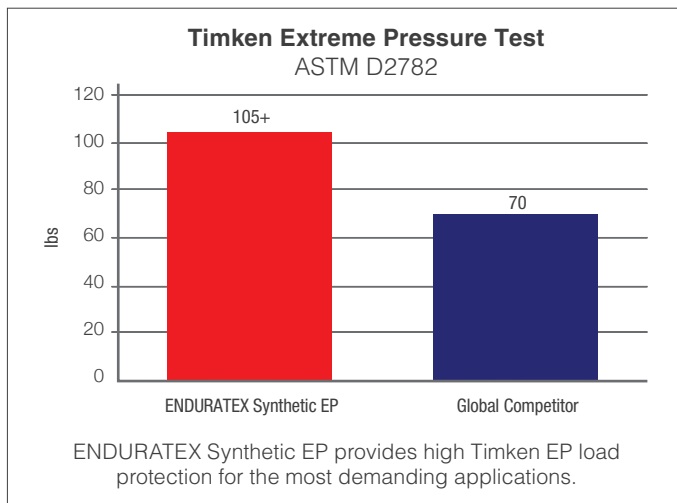
Outstanding anti-wear protection

- Extends equipment life
- Designed to protect equipment being operated under tough high load conditions
- Improves operating reliability over a wide range of gearbox loads



Better film strength and extreme pressure properties than a global competitor

- Extends gear and bearing life
- Reduces likelihood of seizure, scuffing or spalling of gear teeth and bearings under high load conditions and provides resistance against micropitting fatigue



Synthetic formulation reduces friction

- Energy efficient over a wide temperature range

Excellent extreme temperature performance

- ENDURATEX Synthetic EP gear oils protect your equipment in the most extreme temperature conditions

Wider range of service temperature

- Inherent high viscosity index (VI) provides a wider operating temperature range

Protects against water damage

- Provides excellent resistance to rust and copper corrosion

APPLICATIONS

ENDURATEX Synthetic EP premium performance lubricants are recommended for enclosed industrial gear drives and bearings particularly where they are operated under heavy duty conditions such as heavy loading, slow speed, shock loads and in wide extremes of temperature.

The tough oil film and low coefficient of friction save energy in gearboxes. The high viscosity index of ENDURATEX Synthetic EP gear oils mean they retain their viscosity at high operating temperatures. This often allows the use of a lower ISO grade than with conventional gear oil, resulting in even greater energy savings.

The ENDURATEX Synthetic EP line is designed to combat high temperature conditions and will run cooler while maintaining exceptional lubricant film strength. For gearboxes that operate outdoors, selected ISO grades of ENDURATEX Synthetic EP gear oils are capable of operating at temperatures as low as -30°C (-22°F) or below.

When converting a gearbox to ENDURATEX Synthetic EP, it is recommended it be cleaned and flushed first to gain the full benefit of the product. ENDURATEX Synthetic EP gear oils are compatible with mineral oils, polyalphaolefin lubricants and most seal materials except natural rubber.

ENDURATEX Synthetic EP gear oils are designed to operate between a temperature range of -30°C (-22°F) to 121°C (250°F).

ENDURATEX Synthetic EP gear oils are designed to meet the following OEM standards:

- DIN 51517-3-August 2011
- Approved for Flender Gear Units
- Eickhoff Gear
- Jahnel Kestermann
- AIST 224 (formerly US Steel 224)
- AGMA 9005-E02 (EP)
- David Brown S1.53.101 Type E
- MAG IAS (formerly known as Cincinnati Machine)

ENDURATEX Synthetic EP 150, 220, 320 and 460 viscosity grades are listed on the Flender Gear Units and Geared Motors T7300 Approved Lubricants List and meet Flender requirements for micropitting protection performance. ENDURATEX Synthetic EP is suitable for use in GE 787/788 drive systems.

TYPICAL PERFORMANCE DATA

Property	Test Method	ENDURATEX SYNTHETIC EP			
		150	220	320	460
AGMA Grade		4 EP	5 EP	6 EP	7 EP
Density, kg/L @ 15°C	D4052	0.856	0.860	0.862	0.864
Colour	D1500	1.0	1.0	1.0	1.0
Viscosity, cSt @ 40°C	D445	150	226	331	466
cSt @ 100°C		19.5	26.2	35.5	46.3
SUS @ 100°F		772	1050	1534	2160
SUS @ 210°F		98	126	168	217
Viscosity Index	D2270	148	148	153	155
Pour Point, °C / °F	D5950	-54 / -65	-48 / -54	-42 / -44	-39 / -38
Temperature required for 150,000 cP, °C / °F	D2983	-41 / -42	-36 / -33	-32 / -26	-24 / -11
Flash Point, COC, °C / °F	D92	232 / 450	235 / 455	237 / 459	237 / 459
Rust, Procedure A & B, 24 h	D665	Pass	Pass	Pass	Pass
Copper Corrosion, 3h @ 100°C	D130	1b	1b	1b	1b
Timken OK Load, kg / lb	D2782	48 / 106	48 / 106	48 / 106	48 / 106
Four Ball EP Weld, kg / lb	D2783	250 / 550	250 / 550	250 / 550	250 / 550
FZG Failure Load Stage	DIN 51354	>12	>12	>12	>12
FZG Micropitting Test @ 60°C	FVA 54/7	Fail 10	Fail 10	Fail 10	Fail 10
FZG Micropitting Test @ 90°C	FVA 54/7	Fail 10	Fail 10	Fail 10	Fail 10

The values quoted above are typical of normal production. They do not constitute a specification.

Learn more about us: lubricants.petro-canada.com
 Contact us: lubecsr@hfsinclair.com

Committed to the disciplined operation of our business.



Petro-Canada Lubricants Inc.
 2310 Lakeshore Road W. Mississauga, Ontario, Canada L5J 1K2
lubricants.petro-canada.com

Trademarks are owned or used under license.
 IM-7985E (2022.06)