

## elba Gear-SYN EP 150

# ELBALUBES Gear-SYN EP 150 Synthetic Gear Oil User Manual

High Performance Lubricant for Heavy-Duty Industrial Gears

## 1. PRODUCT OVERVIEW

ELBALUBES Gear-SYN EP 150 is a synthetic gear oil engineered for a wide range of industrial enclosed gearing and plain or rolling element bearings that require an Extreme Pressure (EP) gear oil. This lubricant offers superb oxidation and thermal stability, coupled with excellent low-temperature performance across diverse applications. It maintains protection under varying load and speed conditions.

The Gear-SYN EP 150 formulation includes outstanding EP additives to provide a protective layer against shock loading, proving particularly effective where micropitting of gear teeth has been a concern. Its low friction characteristics contribute to lower operating temperatures and enhanced gear efficiency. An effective demulsifier rapidly separates water from the oil, preventing foaming, maintaining oil film integrity, and reducing the risk of corrosion and premature oxidation.

### Key Features and Benefits:

- Outstanding resistance to high temperature thermal stress and oxidation, leading to longer oil life and exceptional lubrication.
- Excellent fluidity at low temperatures and a low coefficient of friction at all temperatures, facilitating easier start-ups and energy-efficient operation.
- Unique combination of synthetic base oils and antiwear additives ensures low gear and bearing wear, including resistance to micropitting.
- Special additives minimize corrosion of bronze and copper metals while protecting iron and steel components from oxidation.
- Longer oil life, extended gear and bearing life, and excellent lubricity contribute to reduced maintenance costs and greater operating efficiency.



Image 1.1: A 1-gallon container of ELBALUBES Gear-SYN EP 150 Synthetic Gear Oil, showing the product label with safety information and brand logo.

## 2. SAFETY INFORMATION

Always handle industrial lubricants with care. Refer to the Safety Data Sheet (SDS) for complete safety information. The following provides general first aid and handling precautions:

### 2.1. First Aid Measures

- **Ingestion:** Clean mouth with water and drink plenty of water afterwards. Do not induce vomiting. Immediately consult a physician or poison control center.
- **Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist, call a physician.
- **Skin Contact:** Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before reuse. If skin irritation persists, call a physician.
- **Inhalation:** Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. If symptoms persist, call a physician.

## 2.2. Handling and Storage Precautions

- **General Measures for Safe Conditions:** Store in original containers. Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep away from heat and direct sunlight.
- **Disposal:** Dispose of in accordance with local, state, federal, OSHA, and D.O.T. regulations (29 CFR 1910.1200 and 49 CFR Parts 171-180). Consult the product's Material Safety Data Sheet (MSDS) for detailed disposal information.

## 3. APPLICATIONS

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ELBALUBES Gear-SYN EP 150 is suitable for a variety of industrial applications requiring high-performance gear lubrication:

- Vibratory roller exciter gearboxes.
- Severely loaded industrial gears.
- Stationary and mobile equipment, antifriction and journal bearings.
- Enclosed gearboxes requiring EP lubricants.
- Steel-on-steel fittings.
- Circulating oils systems.



Image 3.1: Illustration depicting severely loaded industrial gears, an ideal application for ELBALUBES Gear-SYN EP 150.

# VIBRATORY ROLLER EXCITER GEAR BOX



## ELBALUBES GEARSYN EP OIL

Image 3.2: A vibratory roller exciter gearbox, demonstrating another key application for this synthetic gear oil.

### 4. SETUP AND PREPARATION

Proper preparation is essential for optimal performance and longevity of your equipment when using ELBALUBES Gear-SYN EP 150.

1. **Equipment Inspection:** Before applying the lubricant, ensure the gear system or bearing housing is clean and free from contaminants, old oil residues, or debris.
2. **Drain Old Lubricant:** Completely drain any existing lubricant from the system. If switching from a different type of lubricant, consider flushing the system according to equipment manufacturer guidelines to prevent incompatibility issues.
3. **Check Seals and Gaskets:** Inspect all seals and gaskets for wear or damage. Replace any compromised components to prevent leaks and maintain system integrity.
4. **Determine Fill Volume:** Consult your equipment's service manual for the correct lubricant fill volume and level indicators.
5. **Storage:** Store ELBALUBES Gear-SYN EP 150 in its original, tightly sealed container in a cool, dry, well-ventilated area, away from direct sunlight and heat sources.

## 5. OPERATING INSTRUCTIONS

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Follow these guidelines for effective operation with ELBALUBES Gear-SYN EP 150:

1. **Filling:** Carefully pour the ELBALUBES Gear-SYN EP 150 into the designated fill points of the equipment, ensuring the correct level is reached as specified by the manufacturer. Avoid overfilling.
2. **Initial Run:** After filling, operate the equipment at a reduced load or speed for a short period to allow the lubricant to circulate thoroughly and coat all moving parts.
3. **Monitor Performance:** During initial operation and subsequent use, regularly monitor the equipment for unusual noises, excessive heat, or leaks.
4. **Temperature Range:** This lubricant is designed for a wide range of operating temperatures. However, always ensure your equipment operates within its specified temperature limits.
5. **Compatibility:** While ELBALUBES Gear-SYN EP 150 is a high-performance synthetic oil, avoid mixing it with other types of lubricants unless compatibility has been verified by a professional or the equipment manufacturer.

## 6. MAINTENANCE

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Regular maintenance is crucial to maximize the benefits of ELBALUBES Gear-SYN EP 150 and extend equipment life.

1. **Lubricant Analysis:** Periodically conduct oil analysis to monitor the condition of the lubricant and detect any potential issues such as contamination, wear metals, or degradation. This helps in determining optimal oil change intervals.
2. **Oil Change Intervals:** Adhere to the equipment manufacturer's recommended oil change intervals. These intervals may be adjusted based on oil analysis results, operating conditions, and environmental factors.
3. **Check for Leaks:** Regularly inspect the equipment for any signs of lubricant leaks. Address leaks promptly to prevent lubricant loss and potential environmental contamination.
4. **Water Separation:** ELBALUBES Gear-SYN EP 150 incorporates an effective demulsifier. If water ingress is suspected, check for water accumulation and drain it off as necessary to maintain oil film integrity and prevent corrosion.
5. **Filter Replacement:** Replace oil filters according to the equipment manufacturer's schedule to ensure the lubricant remains clean and free of particulate contaminants.

## 7. TROUBLESHOOTING COMMON ISSUES

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This section addresses common issues related to industrial gear lubrication. For complex problems, consult a qualified technician or ELBALUBES support.

- **Excessive Operating Temperature:**

*Possible Causes:* Insufficient lubricant level, lubricant degradation, incorrect lubricant viscosity, excessive load, poor heat dissipation.

*Solutions:* Check lubricant level and top up if necessary. Perform oil analysis to assess lubricant condition. Ensure correct lubricant grade is used. Reduce load if possible. Verify cooling system functionality.

- **Unusual Noises (e.g., grinding, whining):**

*Possible Causes:* Insufficient lubrication, worn gears/bearings, contamination.

*Solutions:* Check lubricant level. Perform oil analysis for wear metals. Inspect gears and bearings for



damage. Drain and replace lubricant if contaminated.

- **Foaming:**

*Possible Causes:* Water contamination, air ingress, lubricant degradation, incompatible lubricant mixture.

*Solutions:* Check for water ingress and drain if present. Inspect seals for air leaks. Perform oil analysis.

Avoid mixing different lubricant types.

- **Leaks:**

*Possible Causes:* Worn seals/gaskets, loose fittings, overfilling.

*Solutions:* Inspect and replace worn seals or gaskets. Tighten fittings. Ensure correct lubricant fill level.

- **Premature Oil Degradation:**

*Possible Causes:* Overheating, contamination, extended drain intervals.

*Solutions:* Address causes of overheating. Prevent contamination. Adhere to recommended oil change intervals or adjust based on oil analysis.

## 8. PRODUCT SPECIFICATIONS

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ELBALUBES Gear-SYN EP 150 meets or exceeds the performance requirements of AGMA 9005-E02, AIST (US Steel)224, Boston gear, Cincinnati machine, DIN 51517 Part 3, FAG, Flender AG, and SKF.

### 8.1. Physical Properties

## ELBA GEARSYN EP OILS

### Products Features and Benefits :

- Vibratory roller exciter gear boxes.
- Severely loaded industrial gears.
- Stationary and mobile equipment, antifriction and journal bearings.
- Enclosed gearboxes requiring EP Lubricants.
- Steel-on-steel fittings.
- Circulating oils systems.

### Supports the performance requirements of:

- AGMA 9005-E02
- AIST(US Steel)224
- Boston gear
- Cincinnati machine (see table below)
- DIN 51517, Part 3
- FAG
- Flender AG
- SKF

### Physical Properties

Products	150	220	320	460
ISO Grade	150	220	320	460
AGMA Number	4EP	5EP	6EP	7EP
Viscosity				
@ 40°C, cSt	153	228	314	468
@ 100°C, cSt	15.3	19.7	24.3	31.8
Viscosity Index	101	99	98	99
Flash Point, °F (°C)	435 (244)	484 (251)	489 (254)	478 (298)
Pour Point, °F (°C)	-29 (-34)	-26 (-32)	-22 (-30)	-11 (-29)
Copper Corrosion	1B	1A	1B	1B
Rust Test	Pass	Pass	Pass	Pass
FZG Gear Test	12+	12+	12+	12+

**Shelf Life:** Product shelf life is 3 years from the date of manufacture, after which the product should be certified prior to use.



Image 8.1: Table detailing the physical properties of ELBALUBES Gear-SYN EP oils across various ISO grades.

### ELBALUBES Gear-SYN EP Physical Properties (ISO Grade 150)

Property	Value (ISO Grade 150)
ISO Grade	150
AGMA Number	4EP
Viscosity @ 40°C, cSt	153



Property	Value (ISO Grade 150)
Viscosity @ 100°C, cSt	15.3
Viscosity Index	101
Flash Point, °F (°C)	435 (244)
Pour Point, °F (°C)	-29 (-34)
Copper Corrosion	1B
Rust Test	Pass
FZG Gear Test	12+

## 8.2. General Product Details

- **Liquid Volume:** 1 Gallon (Case of 6)
- **Package Information:** Pail
- **Material Compatibility:** Copper, Synthetic, Steel, Metals
- **Item Weight:** Approximately 50 Pounds (for 1 Gallon Case of 6)
- **Manufacturer:** Elbalubes
- **Date First Available:** December 25, 2020
- **Shelf Life:** Product shelf life is 3 years from the date of manufacture, after which the product should be certified prior to use.







## 9. WARRANTY INFORMATION

Specific warranty details for ELBALUBES Gear-SYN EP 150 Synthetic Gear Oil are not provided in this manual. For information regarding product warranty, please contact ELBALUBES directly or refer to your purchase documentation.

## 10. SUPPORT AND CONTACT INFORMATION

For technical assistance, product inquiries, or support, please contact the manufacturer:

- **Manufacturer:** Elbalubes
- **Website:** [www.elba-lubes.com](http://www.elba-lubes.com)
- **General Inquiries:** Refer to the contact section on the official ELBALUBES website for the most current contact methods.

	<p><a href="#">ELBA Kühltheken: Handbuch für Gebrauch und Wartung</a></p> <p>Umfassendes Handbuch für die ELBA Kühl- und Tiefkühlinseln (Modelle TN, BT/TN, L.100, L.120, L.150, L.200). Enthält Anleitungen zur Installation, Bedienung, Wartung, Reinigung und Fehlerbehebung.</p>
	<p><a href="#">Mobil SHC Gear 460 Käyttöturvallisuustiedote - ExxonMobil</a></p> <p>Tämä käyttöturvallisuustiedote tarjoaa kattavat tiedot Mobil SHC Gear 460 -synteettisestä vaihteistoöljystä, mukaan lukien vaarojen tunnistaminen, turvallinen käsittely, varastointi ja hätätoimenpiteet.</p>
	<p><a href="#">Marlin Gear Manual: Principles, Types, and Applications</a></p> <p>Comprehensive guide from Marlin Sprocket &amp; Gear, Inc. detailing mechanical power transmission fundamentals, various gear types (spur, helical, bevel, miter, worm), their principles, applications, and lubrication. Essential resource for understanding gear technology.</p>
	<p><a href="#">VROOAM Marine Gear Lube 90: High-Performance Mineral Gear Oil for Marine Transmissions &amp; Lower Units</a></p> <p>VROOAM Marine Gear Lube 90 is a premium mineral gear oil engineered for marine transmissions and outboard lower units. This high-quality lubricant offers superior oxidation resistance, anti-corrosion, anti-foam, and extreme pressure (EP) properties, ensuring optimal performance and protection for your marine equipment. Meets SAE 90 viscosity and API GL4 specification.</p>
	<p><a href="#">XADO Industrial Product Catalogue: Lubricants, Greases, Additives, and Cleaners</a></p> <p>Comprehensive product catalogue from XADO Industrial, featuring REVITALIZANT® technology for industrial oils, greases, cleaners, metal conditioners, and extreme additives designed to restore, protect, and enhance the performance and lifespan of industrial equipment.</p>
	<p><a href="#">MOBILUBE 1 SHC 75W-90 Safety Data Sheet</a></p> <p>Comprehensive Safety Data Sheet for ExxonMobil's MOBILUBE 1 SHC 75W-90 synthetic gear oil. Provides detailed information on product identification, hazards, composition, safe handling, first aid, fire-fighting, accidental release, exposure controls, physical/chemical properties, stability, toxicology, ecology, disposal, transport, and regulatory information.</p>