

UNIRICHLUBE RS3050

Ashless PAG High-Temperature Circulating and Compressor Oil Package

High-temperature oxidation, antiwear and rust protection for PAG and synthetic ester lubricant systems.

PRODUCT OVERVIEW

UNIRICHLUBE RS3050 is an ashless multifunctional additive package formulated with high-temperature antioxidants, EP/antiwear components, rust inhibitors, metal deactivators and antifoam agents. It is designed for high-temperature circulating oils and air-compressor oils based on polyalkylene glycol (PAG) and synthetic ester base stocks.

The product supports thermal-oxidation stability, antiwear and rust protection, and foam-control performance in non-EP lubricant systems. Finished-lubricant performance depends on base-oil selection, treat rate, blending process and complete finished-oil validation.

Key Benefits

- Ashless chemistry suitable for low-ash and ashless lubricant formulations.
- Supports high-temperature oxidation stability, antiwear performance, rust prevention and copper protection.
- Helps improve air-release, foam-control and water-separation performance.
- Well suited to PAG and synthetic ester base-oil systems; compatibility should be verified before use.

Recommended Applications

- PAG- or synthetic ester-based screw air-compressor oils.
- Long-life centrifugal air-compressor oils.
- High-temperature circulating oils.
- May be used as a formulation reference for ISO 6743-3 DAG / DAJ-type lubricants; final conformity must be confirmed by finished-oil testing.

Recommended Treat Rates

Application	Typical Performance Target	Recommended Treat Rate
Ashless screw air-compressor oil	8,000–10,000 operating hours	1.2–1.5%
Long-life centrifugal air-compressor oil	Determined by finished-oil performance target	1.0%
High-temperature circulating oil	Determined by finished-oil performance target	0.6%

Note: The above rates are formulation-development guidance. The final treat rate should be confirmed against the base-oil system, equipment duty and finished-oil validation results.

Typical Physical Properties

The following values are typical and do not constitute product specifications or contractual commitments.

Property	Test Method	Typical Value
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Appearance	Visual	Brown, clear liquid
Density at 15 °C, kg/L	ASTM D1298	0.99
Kinematic Viscosity at 40 °C, mm ² /s	ASTM D445	170
Flash Point, COC, °C	ASTM D92	> 200
Total Acid Number, mg KOH/g	ASTM D664	≤ 1.0
Ash, %	ASTM D874	≤ 0.1
Solubility Mineral oil / synthetic hydrocarbons Esters / PAG Water	—	Insoluble Compatible Insoluble

Typical Formulation Performance

Test fluid: PAG ISO VG 46 (80–90%) + synthetic ester ISO VG 46 (10–20%) + UNIRICHLUBE RS3050 (1.50%).

Property	Test Method	Typical Value
Viscosity Index	ASTM D2270	175
Flash Point, COC, °C	ASTM D92	240
Pour Point, °C	ASTM D97	–45
Total Acid Number, mg KOH/g	ASTM D974	0.10
Rotating Pressure Vessel Oxidation Test, min	ASTM D2272	1,800
Copper Strip Corrosion (100 °C, 3 h)	ASTM D130	1A
Rust Test	ASTM D665	Pass
Foam tendency/stability, mL/mL Sequence I, 24 °C Sequence II, 93.5 °C Sequence III, after 24 °C	ASTM D892	5/0 10/0 5/0
Demulsibility at 54 °C, mL / min Oil / Water / Emulsion Separation Time	ASTM D1401	40/37/3 10

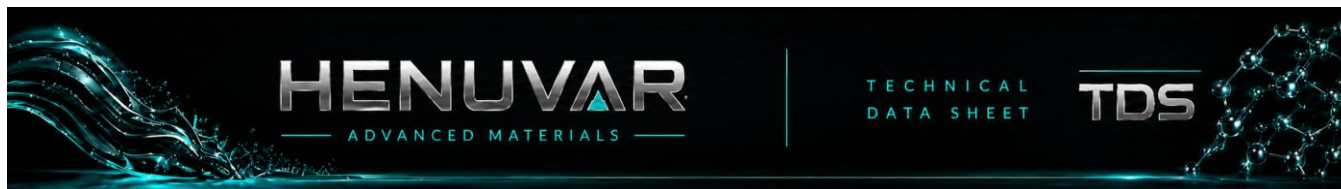
Note: Typical performance is affected by base oil, blending process and test conditions. Users should validate performance against their formulation and equipment requirements.

PACKAGING

- 180 KG steel drum
- Custom OEM packaging available

STORAGE AND HANDLING

Store in tightly closed original containers indoors and protect from moisture, direct sunlight and contamination. Where outdoor storage is unavoidable, keep containers protected from rain and standing water. Storage



temperatures should not exceed 60 °C; avoid prolonged exposure to severe cold or large temperature swings. Follow first-in, first-out inventory practice and inspect packaging integrity before use.

QUALITY AND MANAGEMENT SYSTEMS

Manufactured within management systems certified to ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 and ISO 50001:2018.

Disclaimer

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