

UNIRICHLUBE MBX

Ashless Extreme-Pressure / Antiwear Additive

Controlled sulfur activity, high load-carrying protection and strong antioxidant synergy.

PRODUCT OVERVIEW

UNIRICHLUBE MBX is a high-purity, ashless sulfur-containing extreme-pressure and antiwear additive for industrial lubricants operating under severe load and elevated temperature. Its controlled sulfur activity supports strong load-carrying and wear protection while maintaining light color, low odor and good formulation compatibility.

MBX also functions as a hydroperoxide decomposer and free-radical scavenger. It can deliver pronounced antioxidant synergy with hindered phenolic and diarylamine antioxidants, making it particularly valuable in industrial gear oils, compressor oils, circulating oils, hydraulic fluids and long-life greases.

KEY BENEFITS

- Ashless EP/AW chemistry for high load-carrying capacity and durable wear protection.
- Controlled sulfur activity with low ash contribution and copper corrosion rating of 1b.
- Strong antioxidant synergy with phenolic and aminic primary antioxidants.
- High sulfur content (typically 28–30%) for efficient performance at practical treat rates.
- Light color, low odor and broad compatibility with common lubricant additive systems.

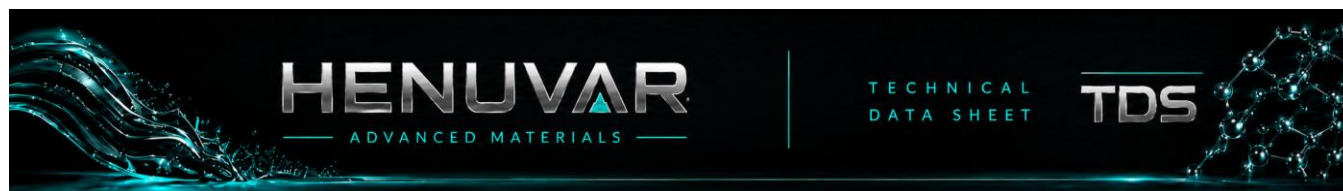
RECOMMENDED TREAT RATE

EP/AW applications: typically 2.0–4.0% by mass. Antioxidant booster applications: typically 0.5–1.0% by mass. Begin at the lower end and optimize through finished-fluid testing for the selected base oil, additive system and target specification.

TYPICAL CHARACTERISTICS

Values shown are typical or internal control values and do not constitute a sales specification unless agreed in writing.

Property	Test Method	Typical / Control Value
Appearance	Visual	Clear light amber liquid
Density at 20 °C, kg/L	ASTM D1298	1.04–1.08
Kinematic viscosity at 100 °C, mm ² /s	ASTM D445	15
Flash point, °C	ASTM D92	177
Water content, ppm	ASTM D6304	≤ 200
Purity, %	HPLC	97.0–100.0
Sulfur content, %	ICP (internal method)	28–30
Copper corrosion	ASTM D130	1b
Ash, %	ASTM D482	< 0.01



ILLUSTRATIVE ANTIOXIDANT SYNERGY

Historic mineral-oil screening data. BHT = 2,6-di-tert-butyl-p-cresol. RPVOT results are illustrative formulation results, not product specifications; performance must be confirmed in the customer's formulation.

Property	Mineral base oil + 0.15% BHT	Mineral base oil + 1.0% MBX	Mineral base oil + 0.15% BHT + 1.0% MBX	Test note
RPVOT, min	141	240	1125	Historic screening

FORMULATION GUIDANCE

- Add slowly to the base oil or partial additive package under moderate agitation and ensure complete dissolution.
- Mild heating may be used to accelerate homogenization; avoid localized overheating and moisture contamination.
- Confirm compatibility and validate oxidation stability, load-carrying capacity, corrosion, deposits and seal performance.

PACKAGING

- 202.5 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 drums protected from rain and standing water. Storage temperatures should not exceed 60 °C; avoid severe cold and large temperature swings. Follow first-in, first-out inventory practice.

HEALTH, SAFETY AND ENVIRONMENT

Consult the current Safety Data Sheet (SDS) before handling. Observe appropriate industrial hygiene, personal protective equipment, spill-control, transport and disposal requirements. Users remain responsible for compliance with applicable laws and regulations.

Disclaimer

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