



**Mobil EAL™ 224H**  
Mobil Industrial , Finland  
Hydraulic Fluid

**Product Description**

Mobil EAL 224H is a premium performance environmentally aware hydraulic fluid designed to provide outstanding performance in hydraulic and circulation systems operating at moderate conditions. It provides excellent anti-wear and film strength characteristics necessary for hydraulic systems operating under high load and pressures. Its 12-stage rating in the FZG Gear Load test demonstrates a high level of protection against wear and scuffing and the suitability of this product to protect gears and bearings used in conjunction with hydraulic systems. Mobil EAL 224H provides excellent protection against corrosion and ensures very good multi-metal compatibility allowing its use in systems employing various metallurgy that may be used in pump and component designs. It also provides very good thin-film protection against rusting. In addition to its exceptional performance capability, it satisfies the requirements for ready biodegradability and non-toxicity making it a desirable product where leakage or spillage of conventional oils could result in damage to the environment.

It is formulated from select, high-quality, high-VI vegetable oils and a specifically engineered additive system to meet or exceed the performance requirements of hydraulic pump and system builders while satisfying the stringent criteria for biodegradability and toxicity.

**Features and Benefits**

Mobil EAL 224H provides excellent anti-wear, lubricity, and film strength performance in hydraulic and circulation systems operating under moderate operating conditions. The ready biodegradability and virtually non-toxic nature of this product makes it an excellent choice where leakage or spillage could enter environmentally sensitive areas. The inadvertent leakage or spillage of this product in environmentally sensitive areas could result in easier clean-up and lower remediation costs.

Features	Advantages and Potential Benefits
Ready Biodegradability and Non-Toxicity	Reduces potential for environmental damage Lowers potential remediation and clean-up costs caused by spills or leakage Becomes an integral part of plant environmental program
Outstanding Load-Carrying and Anti-Wear Properties	Protects system components against wear and scuffing Provides long equipment life
Exceptional Corrosion Protection	Reduces corrosion of internal system components
Excellent Multi-Metal Compatibility	Will not react with steel or copper alloys
Good Elastomer Compatibility	Works well with same elastomers used with conventional mineral based oils. No need for special seals or elastomers

**Applications**

- Hydraulic systems where spills or leakage could result in damage to the environment
- In systems where readily biodegradable and virtually non-toxic fluids may be required
- Gear systems requiring either an ISO VG 32 or 46 oil with mild extreme-pressure characteristics
- Systems containing servo-valves
- Hydraulic systems operating with oil temperatures in the range of 0 F to 180 F
- Marine and mobile equipment operating in environmentally sensitive areas
- Circulation systems operating under mild to moderate service conditions
- Industrial hydraulic systems where leaked or spilled fluids could get into plant effluent
- Air line oilers and some limited oil-mist generating systems
- Air-over-hydraulic fluid systems operating in environmentally sensitive areas

Specifications and Approvals

Mobil EAL 224H recommended for use in applications requiring:

- Environmentally friendly characteristics
- Anti-wear protection
- Compatibility with system components

Properties and Specifications

Property	
Aquatic Toxicity, LL50, ppm, OECD 203 Mod	>5000
Biodegradability, CO2 Conversion, %, EPA560/6-82-003	>70
Flash Point, Cleveland Open Cup, °C, ASTM D92	294
Four-Ball Wear Test, Scar Diameter, 40 kg, 600 rpm, 30 min, 93 C, mm, ASTM D4172	0.35
FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1	12
Kinematic Viscosity @ 100 C, mm2/s, ASTM D445	8.3
Kinematic Viscosity @ 40 C, mm2/s, ASTM D445	36.78
Pour Point, °C, ASTM D97	-34
Specific Gravity, 15 C/15 C, ASTM D1298	0.921
Vickers 104C Wear Test at 66 C, mg, D2882	10
Viscosity Index, ASTM D2270	212

Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ <http://www.msds.exxonmobil.com/psims/psims.as>

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ExxonMobil Finland Oy Ab  
Satamatie 10  
21100 Naantali - FINLAND

+358 (0) 10 40 8500  
<http://www.mobil.fi>

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