

# Mobil EAL Hydraulic Oil 32 and 46

## EAL Hydraulic Oil

### Product Description

Mobil EAL Hydraulic Oil 32 and 46 are premium quality, high performance hydraulic oils developed to meet the demand for environmentally acceptable hydraulic fluids. The products are based on synthetic, readily biodegradable esters. A high-performance, carefully selected additive package provides excellent anti-wear and extreme pressure (EP) properties as well as good thermal stability and corrosion protection. Inherently strong oxidation resistance helps to prevent gumming and deposit formation even at high temperatures. Because of the high natural VI of the base fluid and low pour point, the viscosity-temperature behaviour allows for a very wide operating temperature range. Compared to vegetable oil based (HETG) products, HEES (Hydraulic Oil Environmental Synthetic Ester) fluids, such as the Mobil EAL Hydraulic Oil series, can give an overall improved performance and in particular related to higher operating temperatures and better thermal and oxidation resistance. According to the German WGK Water Endangering Hazard Classification, Mobil EAL Hydraulic Oil 32 and 46 series have a NGW (nicht wassergefährdend) rating. Mobil EAL Hydraulic Oil 46 is "Blue Angel" approved according to RAL in Germany and is listed on the Swedish National Testing and Research Institute (SP) of environmentally accepted hydraulic fluids.

### Features and Benefits

Mobil EAL Hydraulic Oil 32 and 46 provide excellent wide temperature range performance. Their exceptional anti-wear, lubricity and film strength characteristics assure performance in hydraulic and circulation systems operating under moderate to severe conditions. The ready biodegradability and virtually non-toxic nature of these products make them an excellent choice where leakage or spillage could enter environmentally sensitive areas. The inadvertent leakage of spillage of this product in environmentally sensitive areas could result in easier clean-up and lower remediation costs.

Features	Advantages and Potential Benefits
Readily biodegradable hydraulic oil Very low Water Endangering Class - NGW (nicht wassergefährdend)	Reduces potential for environmental damage Lowers potential remediation and clean-up costs caused by spills or leakage Becomes an integral part of plant environmental programmes
High viscosity index and low pour point	Allows a wide operating temperature range
Excellent water demulsibility	Avoids deposit formation and filter plugging for enhanced equipment reliability
Outstanding corrosion protection and multi metal compatibility	Reduces corrosion of internal system components Will not react with steel or copper alloys
Excellent anti-wear/EP properties	Protects system components against wear and scuffing Provides long equipment life
Rapid air release properties	Optimum circulation efficiency and suitability for systems even with small sumps
Good compatibility with seals and joints	Works well with same elastomers used with conventional mineral based oils



## Applications

Mobil EAL Hydraulic Oil 32 and 46 are recommended where there could be accidental fluid loss into the environment or where surface water contamination should be avoided. Application areas include industrial, forestry and marine and particularly in mobile equipment. This can include waste water treatment plants, reservoirs, waterways, parkland, tunnel drilling, forest machines, dredgers, river sluices and harvesting machines, etc. On ships, applications could include bow thrusters, propeller systems and deck machinery. Mobil EAL Hydraulic Oil 32 and 46 are also suitable for use in the power and energy industry, particularly in wind turbine applications. There are some special handling procedures with the Mobil EAL Hydraulic Oil series. Whilst Mobil EAL Hydraulic Oil series is fully miscible with mineral oil based hydraulic oils, its biodegradability will be reduced if the two product types are mixed. It is always recommended to test for miscibility. Residual quantities of mineral oil should be kept at a minimum. Furthermore, paint finishes should be on 2-part epoxy system. Metals such as zinc and tin should be avoided wherever possible. The cleaning effect of these fluids can dislodge large amounts of dirt, which can shorten filter life. Water content during use should be < 0,1%. Any collected water should be drained.

## Specifications and Approvals

Mobil EAL Hydraulic Oil meets or exceeds the following industry specifications:	32	46
ISO 15380	X	X

## Typical Properties

Mobil EAL Hydraulic Oil	32	46
Colour, ISO 2049	1.5	2.0
Viscosity, ASTM D 445		
cSt @ 40°C	32	47
cSt @ 100°C	7	9
Viscosity Index, ASTM D 2270	189	176
Pour Point, °C, ASTM D 97	-39	-39
Flash Point, °C, ASTM D 92	248	310
Density @ 15 °C kg/l, ASTM D 4052	911	922
FZG Scuffing, DIN 51534, A/8.3/90, Fail Stage	12	12

## Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contact office, or via the internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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