



marine lubricants

# Meropa® EliteSyn WS



## Description

Meropa® EliteSyn WS is a synthetic industrial gear lubricant range showing superior performance under demanding operating conditions. It is based on water soluble polyalkylene glycols, thus providing great micro-pitting and EP performance. Furthermore, the product shows good thermal stability and corrosion protection.

## Typical Characteristics

ISO Viscosity Grade	150	220	460	680
MPID	219421	219414	219423	219424
Kinematic Viscosity at 40°C, mm <sup>2</sup> /s	159.0	230.0	470.0	690.0
Kinematic Viscosity at 100°C, mm <sup>2</sup> /s	30.0	42.0	79.0	114.0
Viscosity Index	230	235	252	263
Flash Point, COC °C	>290	>290	>290	>290
Pour point, °C	-42	-42	-36	-36
Density, 15°C, Kg/l	1.05	1.06	1.07	1.07
FE8 bearing roller wear, <30 mg	Pass	Pass	Pass	Pass
FZG load stage, A/8.3/90	>14	>14	>14	>14
FZG micro-pitting, 90°C damage load stage	>10 High	>10 High	>10 High	>10 High

## Recommended Applications

Meropa EliteSyn WS is an industrial gear oil range applicable with the following different gear designs: helical, bevel helical, planetary and worm gears, and marine gear units. The product is also suitable for the use of different applications, like: fill for life — disposable gearboxes, textile lubricants, chain and conveyor lubricants, kiln and oven lubricants, sliding bearings and roller bearings in high load/EP applications.

### Meropa EliteSyn WS Is Approved For:

**Flender** BA T 7300 A+B (revision 16)

### Meropa EliteSyn WS Meets The Requirements Of:

- DIN** 51517 part 3
- David Brown** Type G lubricants
- ISO 12925-1** CKPG

### Meropa EliteSyn WS Is Suitable For Use In:

- Macgregor-Cargotec** deck cranes
- Smag-Peiner** crane grabs



## marine lubricants

### Performance Benefits

#### 1. Protects Under Harsh Conditions

Formulated to provide reliable micro-pitting resistance and component protection under demanding conditions.

#### 2. Offers Component Protection

Designed to offer robust EP performance, which aims to improve component protection and system uptime.

#### 3. High Thermal Stability

High thermal stability helps improve oil service life and maintenance intervals, often reducing downtime.

#### 4. Offers Oxidation Protection

Reliable oxidation resistance often offers optimum keep-clean system protection.

#### 5. System Reliability

Low sludge and deposit formation helps maintain system reliability.

#### 6. Corrosion Protection

Good corrosion protection assists in keeping maintenance costs down.

## PRODUCT MAINTENANCE AND HANDLING

### Compatibility With Metals

There is a incompatibility between PAGs and Al due to the high polarity of Polyglycol with regard to lubricated "tribo components" (friction partners steel to Al material) like bearing cages or worm gear drives and therefore the combination is not advised.

But Al-gearboxes — which have no bearing or sliding surfaces in direct contact with a steel shaft — are uncritical and can therefore be used with Meropa® EliteSyn WS.

The product is not miscible with mineral oils and should preferably not be mixed with other polyglycol based lubricants, in order to preserve the premium properties of Meropa EliteSyn WS.

Mixing Meropa EliteSyn WS and other PAG-based gear oils could result in a change in appearance. Please note that possible haziness has no influence on the performance of Meropa EliteSyn WS.

Meropa EliteSyn WS does not affect common seal and gasket materials. The use of Nitrile Rubber (NBR), Fluoro-Silicone or Vinyl-Methyl Polysiloxane (Q) is recommended for high temperature applications.

The product is not compatible with polyurethane-based elastomers, leather, cork, asbestos, paper and board.

It is recommended to use Meropa EliteSyn WS in gearboxes where the internal surface is unpainted or coated with resistant materials, for example a resistant two-pack epoxy formulation.

### Service Considerations

Unlike mineral oil based lubricants which break down and form deposits at high temperatures, the polyalkylene glycol ("PAG") base fluid of Meropa EliteSyn WS tends to decompose to fluid components or volatile products, retaining its lubricating properties as long as any fluid film remains. The mixed polyalkylene glycol molecules in Meropa EliteSyn WS are also polar in nature, providing a solvent action on polar oxidation compounds which minimizes separation of insoluble sludges and deposits, helping to keep the lubrication system and machine surfaces clean.

PAGs are hygroscopic in nature, and under normal operating conditions Meropa EliteSyn WS can be expected to contain about 2000 ppm of water. Importantly, this is not free water, which can lead to loss of lubricating oil film and corrosion. With Meropa EliteSyn WS, by contrast, absorbed water is hydrogen-bonded to the PAG molecules and does not interfere with oil film retention.

## FLUSH PROCEDURE

*Warning: These products must never be mixed with mineral oil or PAO-based products.*

The following procedure should be adhered to when changing from mineral oil or other type PAG based gear lubricant to Meropa EliteSyn WS:

Let the system run until the oil in service is warm. Drain as much as possible and pay attention to reservoirs, lines, etc., where oil may be trapped. Clean the system from residual sludge.

Flush the system with a minimum quantity of Meropa EliteSyn WS by operating under no load and drain the system while the fluid is warm. Repeat if necessary.

Seals that have been exposed to other oils may shrink when they are exposed to Meropa EliteSyn WS. Therefore, they should always be inspected. Often, careful inspection of the system for leaks can be sufficient, but it may be advantageous to replace the seals.

In case seals are deteriorated, they must be replaced.

It is recommended to inspect the lubricant after one or two days in use to make sure that it is free of extraneous materials. Contamination with significant quantities of other lubricants can, in some cases, lead to sludge formation, foaming and other problems.



marine lubricants



**Disclaimer.** Data provided in this PDS is based on standard tests under laboratory conditions and is indicative only. Minor variations which do not affect product performance are expected in normal manufacturing. This product should not be used for any purpose other than those expressly set out in this PDS. The user has sole responsibility for verifying that this product is suitable for the user's intended application. Recommendations differ between engine manufacturers so always consult your manual. Neither Chevron nor its subsidiaries make any warranty or representation as to the accuracy or completeness of this PDS and neither Chevron nor its subsidiaries accept liability for any loss or damage suffered as a result of the use of this product other than in accordance with the terms of this PDS. (September 2020)