



HAVOLINE[®] GEAR OILS

SAE 80W-90, 85W-140

CUSTOMER BENEFITS

Havoline Gear Oils deliver value through:

- **Extended gear life** — Extreme pressure properties protect hypoid and other types of gears from scuffing and wear.
- **All-weather protection** — Multiviscosity characteristics assure proper gear lubrication at both low and high ambient temperatures.
- **Rust and corrosion protection**— Effective inhibitor package prevents rusting or corrosion of gears and bearings surfaces.
- **No foam** — Excessive foaming minimized by use of foam inhibitor.
- **Long lubricant life** — Outstanding thermal and oxidation stability allow high temperature operation with long lubricant life.

FEATURES

Havoline Gear Oils are multipurpose lubricants.

They are made from paraffinic base stocks and contain a carefully balanced additive package to provide maximum gear protection and long lubricant life.

The sulfur-phosphorus extreme pressure additives used in Havoline Gear Oils provide superior thermal and oxidation stability.

In addition, these lubricants are fortified with rust and corrosion inhibitors, a foam inhibitor, and a pour point depressant.

They also contain a friction modifier that allows use as a top-off lubricant in gear cases with limited-slip or posi-track differentials.

The sulfur-phosphorus extreme pressure additives in Havoline Gear Oils reduce the spalling and wear of gears by creating a microthin sacrificial film on the surface of the gear teeth which is actually softer than the gears themselves. Frictional heat and pressures between tooth surfaces cause the sulfur-phosphorus to react with the surface of the gear teeth at the point of contact, thus creating the sacrificial film.

The highly refined base stocks and various inhibitors in the additive package assure a well-balanced lubricant and long gear and bearing life.

APPLICATIONS

Havoline Gear Oils are recommended for use in all spiral bevel and hypoid differentials, power dividers, and oil-lubricated steering axle wheel bearings.

Their multiviscosity characteristics allow their use in equipment operating over a broad ambient temperature range. This means good cold flow properties and gear protection.

Havoline Gear Oils meet the performance requirements of **API Service Categories** MT-1, GL-4, and GL-5.

Havoline Gear Oils meet the requirements of:

- are qualified for **SAE J 2360** (formerly known as MIL-PRF-2105E)
- Mack GO-J
- (discontinued in 1998) of the **U.S. Department of Agriculture (USDA)** for use in federally inspected meat and poultry plants as H2 lubricants with no food contact.

TYPICAL TEST DATA

SAE Grade	80W-90	85W-140
<i>CPS Number</i>	222271	222272
<i>MSDS Number</i>	8600	8600
API Gravity	28.9	25.9
Viscosity, Kinematic cSt at 40°C cSt at 100°C	145 14.2	341 25.0
Viscosity, Saybolt SUS at 100°F SUS at 210°F	762 76.4	1819 124
Viscosity, Brookfield cP at -12°C cP at -26°C	— 118,000	102,000 —
Viscosity Index	95	95
Flash Point, °C(°F)	221(430)	229(444)
Pour Point, °C(°F)	-33(-27)	-15(+5)
Timken OK Load, lb	65	65
Load Weld, ASTM D 2783 Index, kg Point, kg	50 315	50 315

Typical test data are average values only. Minor variations which do not affect product performance are to be expected in normal manufacturing.