

# Product data

## EPX Gear Oils

### Product Description

The **Castrol EPX Gear Oils** are a range of extreme pressure multipurpose gear oils, available in differing viscosity grades designed for service in differentials, gear boxes and steering gears requiring a hypoid or extreme pressure lubricant.

They conform to the new Society of Automotive Engineers and US Military D type gear oil viscosity classifications with each grade having the ability to operate over a wide range of conditions and temperatures.

The **Castrol EPX Gear Oils** contain sulphur-phosphorus extreme pressure additives which enable them to withstand high rubbing speeds and tooth pressures. These additives are activated by high localised temperatures on the gear tooth surface, and chemically react with the metal to form materials (metallic sulphides and phosphides) of low shear strength between the rubbing surfaces. This prevents welding, scuffing and galling of the gear teeth at their contact points.

Hypoid gear sets function at both high rubbing speeds and tooth pressures. The use of straight mineral or low quality extreme pressure gear oils in certain hypoid units will not prevent welding, scuffing and galling of the gear teeth and this can often lead to failure of the gears.

**Castrol EPX Gear Oils** have excellent thermal stability, resistance to oxidation and offer good corrosion protection to both ferrous and non-ferrous components. Anti-foam properties ensure a continuous film is maintained on gear surfaces while also preventing lubricant loss through breathers.

**Castrol EPX Gear Oils** are available in a range of viscosities to suit various vehicle requirements.

- ◆ **Castrol EPX 75W/80** is recommended where low viscosity oil is needed to provide ease of gear change in manual transaxles that incorporate hypoid gears.
- ◆ **Castrol EPX 80W/90** is widely recommended in hypoid differentials of cars and some trucks. Castrol EPX 80W/90 is also recommended for certain car and truck transmissions.

- ◆ **Castrol EPX 90** is a specially formulated gear oil designed to comply with Mercedes Benz rear axle and mechanical steering system viscosity requirements.
- ◆ **Castrol EPX 85W/140** is the highest viscosity variant of the EPX range and is normally recommended for truck and earthmoving machinery rear axles or in place of **Castrol EPX 80W/90** for vehicles operating in very high ambient temperatures.

## **Product Applications**

### **Castrol EPX 75W/80**

**Castrol EPX 75W/80** is an extreme pressure gear oil recommended for transaxles requiring a very light viscosity hypoid API GL5 lubricant.

**Castrol EPX 75W/80** is the prime recommendation for manual transaxles fitted to late model Citroens, Renaults, Peugeots and Saabs.

**Castrol EPX 75W/80** is normally only recommended for transmissions and transaxles. For hypoid differential lubricant requirements see notes on **Castrol EPX 80W/90**, **EPX 90** or **EPX 85W/140**.

Recommended where these specifications are required:

- ◆ American Petroleum Institute (API), GL5.
- ◆ SAE J306b Viscosity Classification, 75W.
- ◆ US Military, MIL-L-2105 C and D, 75W.
- ◆ Leyland BLS-OL-04 for use in Triumph TR7 and Rover (SDI) 5-speed manual transmissions.
- ◆ Saab 99, Citroen, Renault and Peugeot manual gearboxes and differentials of vehicles with automatic transmissions.

### **Castrol EPX 80W/90**

**Castrol EPX 80W/90** is an extreme pressure hypoid lubricant designed for the protection of heavily loaded steel gears. It is recommended for use in differentials, gear boxes, and steering gear of passenger cars, trucks, farm tractors, earthmoving and excavating machinery requiring a hypoid or extreme pressure lubricant.

Recommended where these specifications are required:

- ◆ API Service Classification, GL5
- ◆ SAE J306b Viscosity Classification, 80W/90
- ◆ US Military MIL-L-2105, D and E 80W/90
- ◆ Ford ESW-M2C-108A
- ◆ GMH HN1181 (formerly AL 93), HN 1046
- ◆ Chrysler MS 3626
- ◆ International Harvester IHC B-22 grades 132 HEP and 135 HEP
- ◆ White Trucks MS-0016

### **Castrol EPX 90**

**Castrol EPX 90** is an extreme pressure hypoid lubricant designed for the protection of heavily loaded steel gears. It is recommended for use in cars, certain trucks (especially Mercedes Benz), farm machinery, earthmoving and excavating equipment.

Recommended where these specifications are required:

- ◆ API Service Classification, GL5
- ◆ SAE J306b Viscosity Classification, 90
- ◆ US Military MIL-L-2105 B, C, D 90
- ◆ Ford ESEW-2C-1003A, ESW-M2C-108A
- ◆ Chrysler 41/MS3725
- ◆ Mercedes Benz Sheet 235

**Castrol EPX 90** has been formulated to fully comply with the viscosity and chemical requirements of Mercedes Benz Specifications for Service Products, Sheet 235. It is the prime recommendation for Mercedes Benz Passenger Car rear axles and mechanical steering systems, cross country vehicle axles and mechanical steering and commercial vehicle hypoid axles and associated transfer cases.

## Castrol EPX 85W/140

Castrol EPX 85W/140 is an extreme pressure hypoid gear lubricant. It is broadly recommended for trucks, farm machinery, earthmoving and excavating equipment. Castrol EPX 85W/140 should be considered for use over the lighter Castrol EPX 80W/90 or EPX 90 when ambient temperatures are high (in the vicinity of 30oC or above).

Recommended where these specifications are required:

- ◆ API Service Classification, GL5
- ◆ SAE J306b Classification, 85W/40
- ◆ US Military MIL-L-2105 B, C, D 85W/40
- ◆ Ford ESW-M2C-108A
- ◆ Chrysler 41/MS 3725

## Product Features & Benefits

- ◆ Anti-weld - high tooth loadings can be tolerated.
- ◆ High film strength - ensures maximum protection against wear and shock loads.
- ◆ Excellent oxidation stability - protection during high temperature operation.
- ◆ Corrosion protection - safeguards against pitting of ferrous and staining of non-ferrous components.
- ◆ Anti-foam - maintains a continuous lubrication film and prevents oil loss through aeration and bleed through the breather.

## Typical Characteristics

Grade	SAE Viscosity	Density @ 15°C	KV @ 100°C cSt	KV @ 40°C cSt	Pour Point °C	Flash Point °C	API GI Rating
EPX 75W/80	75W/80W	0.873	8.8	45	-39	152	5
EPX 80W/90	80W/90	0.894	14.3	139	-30	199	5
EPX 90	85W/90	0.905	17.3	197	-15 max	200	5
EPX 85W/140	85W/140	0.906	27.0	375	-23	198	5

## Health, Safety & Environment

**Castrol EPX Series** gear oils present no significant hazard to the user. As a matter of safe work practice, minimise skin contact and avoid breathing mist or vapour.

For further information, please refer to separate Material Safety Data Sheets available on request.

### Spillage

- Small:** Soak up using an inert mineral adsorbent such as Castrol Diatomaceous Earth and dispose of in the appropriate manner.
- Large:** Corrective action usually dictated by individual company safety procedures. Immediate containment and subsequent removal is essential.
- Disposal:** Oily materials must not be allowed to enter groundwater, watercourses, sewerage or drainage systems. Refer to local Waste Disposal Authority for legal requirements.

### Product Removal

- Bare Metal Surfaces:** Remove with Castrol solvent cleaners or water based degreasers.
- Hand Cleaning:** Use any of the Castrol range of hand cleaners, e.g. CareClean Plus.
- Other Surfaces:** Contact your local Special Products Division in each State Office contact details given below.

Although all reasonable care has been taken to ensure that the information contained in this publication is accurate as at the time of printing, such information is nevertheless liable to variation in the event of changes occurring subsequent to the date of printing it: the blend formulation, methods of storage, or due to the improper handling or application of any of the products referred to, or in the requirements of any specification or approval relating to any of the products.

**For more information contact: Castrol Australia Pty Limited (ABN 87 008 459 407)**

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