



## **Gulf Competition**

### ***Synthetic Gear and Differential Oils***

**(SAE 75W-90, LS 75W-90 and LS 75W-140)**

#### **Product Description**

**Gulf Competition** is a range of products specially formulated for, and tested in, race and rally conditions in a variety of cars. These driveline oils are based on the very latest concept of synthetic fluids, incorporating pure esters as well as synthetic hydrocarbons that have been combined with robust anti-wear additive packages containing special friction modifiers. The oils have been used in the synchromesh gear boxes and final drives (differential units) including those with limited slip performance features so important in competitions such as off-road rallying. The additive system provides protection at least to the levels stipulated by both API GL-4 and GL-5.

#### **Applications**

- High performance gasoline- or diesel-engined race and rally cars
- Synchromesh gearboxes
- Off-set hypoid differential units
- Differential units with limited slip action, for 4 wheel drive

#### **Product Range**

The 75W-90 ester-based gear oil is specially designed to cool and lubricate gearboxes, both with and without synchromesh gear change systems. The additive system provides outstanding protection against corrosion, especially for copper and other alloys used in synchromesh units. This reduces wear, extends synchroniser life and improves gear shifting performance. A unique combination of base fluids, including synthetic esters, protects the oil itself from viscosity loss caused by mechanical shearing, so the functionality of the gearbox remains unaltered even when run at extremely high speeds. It has low friction drag properties which eliminates excessive power consumption in the gearbox itself and helps prevent over-heating. Its fluidity and great anti-foaming properties assist its ability to form an oil film between the gear teeth surfaces, even under even high temperature and high pressure applications

For final drive applications, with off-set hypoid differential units, there are two heavy duty limited slip gear oils in the following grades: 75W-90, and a more robust 75W-140. The anti-wear / extreme pressure additives in these oils have been specially boosted so they can protect the hypoid gear teeth under normal sliding and heavily loaded operating conditions. These oils, especially the 75W-140 grade, also protect the gears under shock loading conditions often encountered in races and rallies, where the wheels often break contact with the road, spin, and then send a shock loading through the transmission as soon as the car touches down. On the other hand, the lower viscosity of the 75W-90 absorbs less power from the engine, allowing for better fuel economy or delivering more engine power to the drive wheels. Both of these have special friction modifiers so they are suitable for use in limited slip transmissions, essential for 4-wheel drive cars in rally driving, and they reduce transmission 'chatter' and, of course, energy-wasting wheel spin. The frictional properties of these oils, derived from the special friction modified formulation, make them unsuitable for use in synchromesh gearboxes.

Properties mentioned above are typical only and minor variations, which do not affect the product performances, are to be expected in normal manufacturing. The above information is based on past history of the grade only and must not be construed as a guarantee of performance. Follow equipment manufacturer's recommendations for performance level and viscosity grade. The Material Safety Data Sheet for this product is available from your nearest Gulf Distributor.

#### **Gulf Oil International**

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## Race Pedigree

Gulf Competition products are used and endorsed by Aston Martin Racing. This team has have enjoyed great success at the Le Mans 24h Race and other events running under the famous Gulf blue and orange livery since 2008.

Furthermore, in recent years the technology selected to make these oils have been used with outstanding success in the following motor racing categories:-

Touring Cars  
 Hill Climbs  
 Single-marque race categories (such as Formula Ford and Formula Renault),  
 Rallies, including cars which have competed in the World Rally Championship (WRC)

Saloon Cars  
 Drag Races

## Use in Passenger Vehicles:

Gulf Competition Oils are primarily intended for motor sport use, for which they are excellent. They are not, however, recommended for long-term/everyday use in most road cars, unless the vehicle has been performance-modified and/or is used extensively for track days. This is especially important if the car is still under the original manufacturers' warranty, when the manufacturer's guidelines should always be followed. A full range of Gulf oils suitable for passenger car motor vehicles can be found on [www.gulfoilltd.com](http://www.gulfoilltd.com), or contact your nearest Gulf distributor.

## Features & Benefits of Gulf Competition Gear Oils

Grade	75W-90	LS 75W-90	LS 75W-140
<b>Gear anti-wear protection</b>	●●●●●	●●●●●	●●●●●
<b>Synchromesh performance</b>	●●●●●	●●●	●●●
<b>Hypoid final drive protection</b>	●●●●	●●●●	●●●●●
<b>Shock loading protection</b>	●●●	●●●●	●●●●●
<b>Use in limited slip differentials</b>	●	●●●●●	●●●●●
<b>Fuel economy/power</b>	●●●●●	●●●●●	●●
<b>High temperature performance</b>	●●●	●●●	●●●●●

## Specifications and Typical Properties of Gulf Competition Gear Oils

Specifications	(no formal specifications can be claimed, but these oils contain performance additives designed to achieve API GL-4 and GL-5)			
Typical Properties per Grade				
Test Parameters	ASTM Method	75W-90	LS 75W-90	LS 75W-140
Viscosity @ 100 °C, cSt	D 445	17.3	17.3	26.0
Viscosity @ 40 °C, cSt	D 445	130	120	140
Viscosity Index	D 2270	145	148	220
Brookfield Viscosity cP	D2983	100,000	88,000	149,000
Flash Point, °C	D 92	>180	>180	>190
Pour Point, °C	D 97	-48	-48	-51
Density @ 15°C, Kg/l	D 1298	0.872	0.897	0.874

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