



# PRODUCT DATA SHEET

## EP MULTIGEAR OILS 80W90 & 85W140

### PRODUCT DESCRIPTION

**Hi-Tec EP Multigear Oils** are superior new generation XRM<sup>R</sup> (Extra Range Multigear) gear oils designed to provide very much improved:

- Thermal stability - XHT<sup>R</sup> (Extra High Temperature)
- Oil seal life
- Durability (gear surface life)
- Corrosion protection to yellow metals under both wet and dry conditions.

These improvements overcome the growing concerns of the gear manufacturers (OEM's - Original Equipment Manufacturers), vehicle and fleet owners in relation to these performance areas when using the previous generation of conventional hypoid extreme pressure drive train lubricants.

**Hi-Tec EP Multigear Oils** are suitable for the lubrication of car, truck and tractor differentials, final drives, transfer and steering gearboxes and manual transmissions, under both heavy and light service conditions.

Special oxidation resistant paraffinic base oils and high performance XHT<sup>R</sup> thermally stable extreme pressure (EP) additives are used in **Hi-Tec EP Multigear Oils** to ensure long service life for transmission drive lines.

**Hi-Tec EP Multigear Oils** are recommended for initial and service fill and top-up of car, truck and tractor manual transmissions, differentials, final drives and transfer and steering gearboxes.

### CHARACTERISTICS

**IMPROVED THERMAL STABILITY:** **Hi-Tec EP Multigear Oils** provide complete XHT<sup>R</sup> protection against the formation of sludge, oxidation and carbonaceous deposit build-up and excessive viscosity increases. This improved protection ensures longer service life of transmission components compared to traditional EP gear oils.

There are increased thermal stresses on modern high performance transmissions due to the following:

- Change in vehicle aerodynamics
- Wider use of driveline retarders
- Increased "Power Density" for transmission and rear axles
- Extended slow speeds and high loads
- Higher ambient temperatures
- Higher horsepower
- Extended warranties/reduced maintenance



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XHT<sup>R</sup> thermally stable **Hi-Tec EP Multigear Oils** not only effectively handle these conditions but LOWER operating temperatures by 10<sup>0</sup>C or more due to the assistance provided by the free flowing base oil components and over treat levels of thermally stable EP additives.

Oxidation stable **Hi-Tec EP Multigear Oils** avoid other lubricant related high temperature degradation problems such as "coked" transmission synchronisers and reduced oil flow to gear and bearings (due to obstructed oil passageways or filters) so that costly transmission failures associated with lubricant do not occur.

**OIL SEAL LIFE EXTENDED:** XHT<sup>R</sup> thermally stable **Hi-Tec EP Multigear Oils** prevents high temperature premature seal failures. Without high temperature protection, decomposed lubricant sludge and deposits can build up in the seal area so that the seal underlip temperatures can be 20<sup>0</sup>C to 30<sup>0</sup>C higher than the bulk oil temperatures in the transmission unit. These temperatures lead to catastrophic degradation of the seal elastomer resulting initially in premature oil leakage and, if not controlled, in transmission failure due to inadequate lubricant supply.

**Hi-Tec EP Multigear Oils** help prevent seal problems which often represented the number one complaint of axle and transmission manufacturers.

**IMPROVED DURABILITY:** **Hi-Tec EP Multigear Oils** provide excellent protection against fatigue pitting which is the life limiting variable of gear sets. OEM's recognise that lubricant protection against pitting is a very important design variable for long transmission life. Field tests, laboratory spalling tests and power divider snap tests confirm that **Hi-Tec EP Multigear Oils** give long durability to gear sets.

**CORROSION PROTECTION:** **Hi-Tec EP Multigear Oils** provide better protection to copper alloys under both wet and dry conditions due to the incorporated special EP additives.

**GEAR TRAIN RATTLE & NOISES ELIMINATED:** The "stay on" properties of the high film strength **Hi-Tec EP Multigear Oils** effectively quieten transmission drive-line noise tendencies under conditions of low speed high torque, high speed low torque and shock loading.

**FOAM INHIBITORS:** **Hi-Tec EP Multigear Oils** minimise the natural development of foam in transmissions in service. Foam is undesirable because it promotes ineffective gear lubrication with resultant premature wear.



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### SPECIFICATIONS

**Hi-Tec EP Multigear Oils**, available in SAE grades 80W/90 and 85W/140, meet the following service requirements:

API GL5

API MT-1

SAE J2360

MIL-L-2105D

MIL-PRF-2105E

Mack GO-J

**Hi-Tec EP Multigear Oils** are also suitable for use in the following equipment: Mack, Daimler-Benz, Ford, GM, Volvo, Clark, Eaton, Fuller and Rockwell.

<u>PROPERTY</u>	<u>80W/90</u>	<u>85W/140</u>
Product Code	2440	2448
Appearance	Natural	Natural
Density, Kg/Lt at 15°C	0.905	0.912
Viscosity, cSt at 40°C	160 - 180	330 - 360
cSt at 100°C	16.0	25.0
cP at (°C)	142,000 (-26)	141,000 (-12)
Viscosity Index	98	95
Pour Point °C	-33	-21
Copper Strip Corrosion, 3 hrs at 100°C	1b	1b
Flash Point, COC, °C	250	258
Carbon Residue, Conradson %	0.39	0.59
Foaming characteristics -		
Sequence 1, After Settling	Nil	Nil
Sequence 2, After Settling	Nil	Nil
Sequence 3, After Settling	Nil	Nil
Thermal Oxidation Stability (CRC L60)	Pass	Pass
Phosphorus, % Mass	0.098	0.098
Nitrogen, % Mass	0.067	0.067
Boron, % Mass	0.020	0.020
Sulphur, % Mass*	1.660	1.660

\*Excludes sulphur due to base oil.

**AVAILABLE IN:** Bulk, 200 Litres, 60 Litres, 20 Litres, 4 Litres

"Hi-Tec Oil Traders Pty Ltd (Hi-Tec Oils) has endeavoured to ensure that all information, representations and specifications contained in this product data sheet are accurate at the time of publication. This general information should be used in conjunction with appropriate inquiries by users of the product including consultation with the vehicle or equipment manufacturers published information.

It is the responsibility of users of the product to use the product safely. Users should consult the safety data sheets for each product at [www.hi-tecoils.com.au](http://www.hi-tecoils.com.au).

Hi-Tec Oils takes no responsibility for injury or damage if the product is used in an inappropriate or unsafe manner. Our product warranty and product quality statement can be viewed at [www.hi-tecoils.com.au](http://www.hi-tecoils.com.au)"

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