



# Multigear<sup>®</sup>

## Ultra high performance total drivetrain lubricants

### Product description

Multigear are ultra high performance total drivetrain lubricants. They are suitable for both API GL 4 and API GL 5 applications.

These advanced technology lubricants are designed with superior quality mineral base stocks with a leading edge additive formulation and are available SAE 80W-90 and 80W-140 viscosity grades.

### Customer benefits

- Specially tuned friction characteristics optimise use in synchronised manual transmission systems and final drives, rationalising inventories and saving time and money
- Advanced technology extends drain intervals over standard mineral transmission oils
- Excellent shear stability ensures fluid viscosity retention throughout lubricant service life
- Very good low temperature fluidity maximises wear protection during cold start-ups
- High temperature oxidation stability prevents oil thickening, optimising system protection
- Compatible with a wide range of elastomer materials, preventing fluid loss through leaks
- High performance rust and corrosion protection maximises system service life
- Robust foam suppression optimises lubrication performance

### Product highlights

- **Extended drain over standard mineral oils**
- **Long-life shear and oxidation stability**
- **Maximum system protection**

#### Selected specification standards include:

API GL-4, GL-5, MT-1	DAF
Daimler	MAN
NATO	Scania
ZF	ZF Lenksysteme

## Applications

- Multigear is designed for use in manual automotive transmissions which require a fluid with API GL-4 or GL-5 performance, and for hypoid drive axles where an EP oil meeting API GL-5 or MT-1 is required. It meets the requirements of SAE J2360 (formerly MIL-PRF-2105E)
- High performance thermal stability makes Multigear suitable for use in applications with higher operating temperatures than is possible when using conventional mineral gear oils. It is also capable of longer service intervals, typically 75% longer than conventional mineral gear oils. (The precise service interval varies according to application and service severity – refer to the manufacturers' literature for further details)
- Multigear is not recommended for use in ZF transmissions fitted with interarders (this includes some models from constructors such as DAF and MAN). For these exceptions, use an approved fluid such as Multigear MTF 75W-80

## Approvals, performance and recommendations

### Performance

#### Viscosity Grade

Viscosity Grade		80W-90	80W-140
• API	GL-4	Meets requirements	Meets requirements
• API	GL-5	Meets requirements	Meets requirements
• API	MT-1	Meets requirements	Meets requirements
• DAF	Gearbox oil for Eaton gearboxes	Meets requirements	-
• DAF	Gearbox oil for ZF gearboxes	Approved <sup>[1]</sup>	-
• DAF	Rear axle without hub reduction	Meets requirements <sup>[2] [4]</sup>	Meets requirements <sup>[2] [5]</sup>
• DAF	Rear axle with hub reduction	Meets requirements <sup>[3] [4]</sup>	Meets requirements <sup>[3] [5]</sup>
• Daimler	MB 235.0	Suitable for application	
• MAN	341 Type E2	Approved	-
• MAN	3343 Type M	Approved	-
• NATO	0-226	Meets requirements	-
• NATO	0-228	-	Meets requirements
• Scania	STO 1:0	Approved <sup>[6]</sup>	Approved <sup>[7]</sup>

### A Chevron company product

## Multigear® – Continued

Viscosity Grade		80W-90	80W-140
• ZF	TE-ML 02B	Approved	-
• ZF	TE-ML 05A	Approved	Meets requirements
• ZF	TE-ML 07A	Approved <sup>[8]</sup> <sup>[9]</sup>	Approved <sup>[8]</sup> <sup>[9]</sup>
• ZF Lenksysteme	TE-ML 08	Approved <sup>[8]</sup>	Approved <sup>[8]</sup>
• ZF	TE-ML 12E	Approved	-
• ZF	TE-ML 16B	Approved	-
• ZF	TE-ML 16D	-	Meets requirements
• ZF	TE-ML 17B	Approved	-
• ZF	TE-ML 19B	Approved	-
• ZF	TE-ML 21A	Approved	Meets requirements

<sup>[1]</sup> ZF gearboxes without intarder, standard changing interval.

<sup>[2]</sup> Except for type 1355 low-deck.

<sup>[3]</sup> Except for type 1356.

<sup>[4]</sup> For outside temperature range -30°C to +40°C; standard changing interval.

<sup>[5]</sup> For outside temperature range -30°C to +50°C; standard changing interval.

<sup>[6]</sup> For use in manual gearboxes where the outside temperature range is -15°C to +20°C.

<sup>[7]</sup> For use in manual gearboxes where the outside temperature range is -10°C to +30°C, and for axle gears and hub reduction gears where the

outside temperature range is -30°C to >+30°C.

<sup>[8]</sup> Products meeting the necessary requirements for this specification are approved without listing.

<sup>[9]</sup> For outside temperatures above -26°C.

### Typical test data

Test	Test Methods	Results	
		80W-90	80W-140
Viscosity Grade		80W-90	80W-140
Product Code		32950.1	33231.1
Viscosity Kinematic, 40°C mm <sup>2</sup> /s	ASTM D445	133	216
Viscosity Kinematic, 100°C, mm <sup>2</sup> /s	ASTM D445	14.0	24.9
Viscosity Brookfield, -26°C, mPa.s	ASTM D2983	130,000	120,000
Viscosity Index	ASTM D2270	103	146
Density, 15°C, kg/l	ASTM D4053	0.898	0.905
Flash Point COC, °C	ASTM D92	210	204
Pour Point, °C	ASTM D97	-30	-36
Copper Corrosion, 3h, 121 °C	ASTM D130	1a	1a
FZG Gear Wear Test A/8.3/90 - Failure load stage	CEC L7A95	>12	>12

The information given in the typical data does not constitute a specification but is an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved. This supersedes all previous editions and information contained in them.

**Disclaimer** Chevron accepts no liability for any loss or damage suffered as a result of using this product for any application other than applications specifically stated in any Product Data Sheet's.

**Health, safety, storage and environmental** Based on current available information, this product is not expected to produce adverse effects on health when used for the intended application and in accordance with the recommendations provided in the Material Safety Data Sheet (MSDS). MSDS's are available upon request through your local sales office, or via the Internet. This product should not be used for purposes other than its intended use. When disposing of used product, take care to protect the environment and follow local legislation.

#### A Chevron company product