



## Technical Data Sheet

- *Low Emissions*
- *Better Fuel Economy*
- *Excellent extreme high/low temperature performance*

# Shell ROTELLA® T6 5W-40

## Fully Synthetic Heavy duty diesel engine oil

Shell ROTELLA® T6 full synthetic heavy duty engine oil with Triple Protection Plus™ technology has been enhanced with fully synthetic base oil plus advanced additive technology to provide protection against wear, deposits and oil breakdown PLUS better low temperature flow and better fuel economy performance.\* Key benefits include; compatibility with exhaust emissions control systems, protection in extreme operating temperatures and fuel economy performance\*.



## Performance, Features & Benefits

Shell ROTELLA® T6 5W-40 heavy duty engine oil with Triple Protection Plus™ technology is designed to provide hard working protection under the most severe engine conditions found in modern low emission engines. The exclusive low ash formulation helps protect the exhaust catalysts and particulate filters found on the latest low emission vehicles.

Shell ROTELLA® T6 5W-40 heavy duty engine oil with Triple Protection Plus™ technology is formulated with Shell PurePlus Technology base oils. Shell PurePlus Technology is the patented process at Pearl GTL (Gas to Liquid) plant in Qatar which converts natural gas into a clear base oil, the main component of engine oils.

Shell PurePlus Technology base oils have a number of better intrinsic properties compared with traditional Group III base oils, as measured in fully formulated engine oils, including better (lower) volatility & better (lower) low-temperature properties.

### • Better fuel economy

Through the use of Shell's most advanced technology, Shell ROTELLA® T6 full synthetic heavy duty engine oil offers enhanced fuel economy capability of 1.5%\* that can save money in fuel consumption, without compromising engine protection or durability. \*Compared to 15W-40 oils

### • Improved wear performance

Provides a significantly increased level of protection against harmful engine wear when compared to previous generation API CJ-4 engine oils.

### • Improved deposit control

The advanced multi-functional dispersant additives in combination with synthetic base oils provide an enhanced level of protection against the effects of soot, dirt and other contaminants.

### • Improved heat resistance

Shell ROTELLA® T6 full synthetic heavy duty engine oil resists breakdown by heat to provide continuous protection throughout the service interval.

### • Emissions system compatibility

Advanced low-ash formulation helps control blocking of or poisoning of exhaust after-treatment devices, helping maintain vehicle emission compliance and engine fuel efficiency.

### • Outstanding shear stability

Shell ROTELLA® T6 Synthetic oil resists viscosity loss through shear and will maintain optimal oil pressure in the engine.

### • Protection in extreme climates

Shell ROTELLA® T6 Synthetic oil is made with Shell PurePlus technology, gas to liquid base oil, which provides many benefits, including improved low temperature flow.

## Main Applications



- **For new and older diesel powered vehicles**

Suitable for new and older diesel powered vehicles from Class 8 tractor/trailers to heavy duty diesel pickups, delivery, utility, and school bus fleets. Suitable as a replacement for mineral and synthetic based SAE 15W-40 API CK-4, CJ-4 oils in low temperature applications.

- **Meets or exceeds diesel engine requirements**

Meets or exceeds requirements of API CK-4, Cummins, Caterpillar, Detroit Diesel, Mack, Mercedes Benz, Volvo and Allison.

- **Gasoline engine applications**

Meets the requirements of API SN.

## Specifications, Approvals & Recommendations

- API CK-4, CJ-4, CI-4 PLUS, CI-4, CH-4
- API SN, SM
- ACEA E9
- JASO DH-2
- Cummins CES 20086, 20081
- Volvo VDS-4.5, VDS-4
- MACK EOS-4.5
- Detroit Fluid Specification (DFS) 93K222, 93K218
- Caterpillar ECF-2, ECF-3
- MAN M3575
- JASO MA, MA2
- Allison TES-439
- MB-Approval 228.31

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

## Typical Physical Characteristics

Properties			Method	Shell ROTELLA T6 5W-40
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ASTM D445	90
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ASTM D445	14.9
Dynamic Viscosity	@-30°C	mPa s	ASTM D5293	6300
Total Base Number		mg KOH/g	ASTM D2896	10.2
Sulfated Ash		%	ASTM D874	1.0
Density	@15°C	kg/l	ASTM D4052	0.846
Flash Point (COC)		°C	ASTM D92	233
Pour Point		°C	ASTM D97	-51

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

## Health, Safety & Environment

- **Health and Safety**

Shell ROTELLA® T6 is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from your Shell representative.

- **Protect the Environment**

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

## Additional Information

- **Advice**

Advice on applications not covered here may be obtained from your Shell representative.