Technical Data Sheet

- *Energy Saving*

Shell **Rimula** *R5 E 10W-40 (CI-4/228.3)*

Synthetic Technology Heavy Duty Diesel Engine Oil

Shell Rimula R5 E Energised Protection oils use exclusive combinations of the latest high performance additives to ensure that the oil adapts and protects under the full range of pressures and temperatures found in modern engines. Enhanced with synthetic technology base oils that further energise the oil performance to deliver an oil with; energy saving - fuel economy performance, excellent soot and viscosity control, outstanding protection against wear and exceptional versatility - one oil fleets with multiple engine makes.

ENERGISED PROTECTION
Adapting to your engine's changing needs

Performance, Features & Benefits

- **Outstanding protection**

  Featuring an exclusive additive system to ensure maximum soot handling, Shell Rimula R5 E delivers excellent wear protection and long oil life in Euro 3, US 2002 and other advanced engines.

- **Fuel economy capability**

  The use of synthetic base oil components provides Shell Rimula R5 E with the capability to improve cold starting and reduce fuel consumption and save money, without compromising engine protection or durability.

- **Improved engine cleanliness**

  The exclusive additive system delivers improved engine cleanliness and protection against piston deposits allowing Shell Rimula R5 E to exceed the demanding requirements of most OEMs.

Main Applications

- **Severe service heavy duty diesel engines**

  Shell Rimula R5 E provides demonstrated protection and performance in the latest high power heavy duty diesel engines from Europe, US and Japanese manufacturers in both on-highway and off-highway applications.

- **High technology low emission engines**

  Shell Rimula R5 E is suitable for most modern low emission engines meeting Euro 2,3, US 2002 emission requirements.

  For the latest low emissions engines, especially those fitted with exhaust diesel particulate traps (DPF), we recommend the use of our low-emissions products, Shell Rimula R6 LM/LME.

Specifications, Approvals & Recommendations

- Cummins: CES 20078, 77, 76, 72, 71
- MACK: EO-M, EO-M+
- MAN: 3275
- MB Approval: 228.3
- Renault Trucks: RLD-2
- Volvo: VDS-3, VDS-2
- API: CI-4, CH-4, CG-4, CF-4, CF.
- ACEA: E7, E5, E3
- Global DHD-1

  For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

Typical Physical Characteristics

Properties			Method	Shell Rimula R5 E 10W-40 (CI-4/228.3)
Viscosity Grade				10W-40
Kinematic Viscosity	@40°C	mm^2/s	ASTM D445	90
Kinematic Viscosity	@100°C	mm^2/s	ASTM D445	13.4
Dynamic Viscosity	@-25°C	mPa s	ASTM D5293	6600
Viscosity Index			ASTM D2270	150
Total Base Number		mg KOH/g	ASTM D2896	10
Sulphated Ash		%	ASTM D874	1.2
Density	@15°C	kg/l	ASTM D4052	0.882
Flash Point (COC)		°C	ASTM D92	220
Pour Point		°C	ASTM D97	-39

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 Rimula R5 E 10W-40 (CI-4/228.3) 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 http://www.epc.shell.com/

- **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.