Shell **Rimula** *R4 15W-40 (CI-4)*

Multigrade Heavy Duty Diesel Engine Oils

Shell Rimula R4 Energised Protection oil uses 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 - from the high temperatures in the pistons, to the extreme loads found in the valve-trains. Featuring extra-active additives to control and sweep away harmful soot and particles found in high performance engines, it delivers excellent soot and viscosity control, outstanding protection against wear and exceptional versatility - one oil for 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 R4 delivers excellent wear protection and long oil life in Euro 3, US 2002 and other advanced engines.

- **Demonstrated performance for all applications**

  Shell Rimula R4 has been tested and proven in real-life applications, from severe duty operation in mining and construction operations to heavy duty haulage in some of the world's most severe environments.

- **Improved engine cleanliness**

  The exclusive additive system delivers improved engine cleanliness and protection against piston deposits allowing Shell Rimula R4 to exceed the demanding requirements of most OEMs.

Main Applications

- **Severe duty heavy duty diesel engines**

  Shell Rimula R4 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 R4 is suitable for most modern low emission engines meeting Euro 4, 3, 2 and 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 R4 L or Shell Rimula R6 LM/LME.

Specifications, Approvals & Recommendations

- Caterpillar: ECF-1-A
- Cummins: CES 20078, 77, 76 ,75, 72 ,71
- DDC: 93K215
- MACK: EO-M, EO-M+
- MAN: 3275-1
- MB Approval: 228.3
- Renault Trucks: RLD-2
- Volvo: VDS-3
- 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 R4 15W-40 (CI-4)
Viscosity Grade				15W-40
Kinematic Viscosity	@40°C	mm²/s	ASTM D 445	109
Kinematic Viscosity	@100°C	mm²/s	ASTM D 445	14.7
Dynamic Viscosity	@-20°C	mPa s	ASTM D 5293	6700
Viscosity Index			ASTM D 2270	139
Total Base Number		mg KOH/g	ASTM D 2896	10
Sulphated Ash		% wt	ASTM D 874	1.2
Density	@15°C	kg/l	ASTM D 4052	0.888
Flash Point (COC)		°C	ASTM D92	230
Pour Point		°C	ASTM D97	-36

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 R4 15W-40 (CI-4) 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.