



# Shell Rotella *ELC Concentrate*

## *Extended Life Coolant System Premium Extended Life Coolant / Antifreeze*

Shell Rotella ELC Extended Life Coolant/ Antifreeze is a carboxylate based coolant for heavy duty diesel, gasoline and natural gas powered engines. Shell Rotella ELC contains ethylene glycol and nitrite and molybdate as secondary inhibitors. This product requires no traditional ELC Extender or supplemental coolant additive (SCA) additions and contains no silicate, borate, nitrate or phosphate. Shell Rotella ELC Extended Life Coolant meets all the requirements of ASTM D3306, D6210, CAT EC-1, TMC RP 329 and RP 338.

### DESIGNED TO MEET CHALLENGES

#### Performance, Features & Benefits

- Minimum coolant life of 600,000 miles without the need of ELC Extender
- No regular Supplemental Coolant Additives (SCA's) required
- Improved water pump seal life due to low dissolved solid levels
- Excellent pitting protection for wet sleeve cylinder liners
- Excellent, long-term corrosion protection of all cooling system metals including aluminum, brass, cast iron, steel, solder and copper
- Excellent heat transfer
- Reduced hard water scale
- Reduced overall coolant and cooling component maintenance
- No silicate dropout or gel formation during use or storage
- Compatible with conventional coolants. Dilution/mixing with nonequivalent coolants will reduce or eliminate extended life properties. Do not dilute this product by more than 15% with conventional coolants or water
- Can be used for top-up of cooling systems containing conventional coolants. When Shell Rotella ELC is used as top-up for conventional coolants, SCA's must still be added

#### Main Applications

- Shell Rotella ELC Extended Life Coolant/ Antifreeze has been proven, with over 150 million kilometers of fleet testing, to provide complete protection of all cooling system components. The inhibitors in Shell Rotella ELC, due to their specific chemistry, are designed to go 600,000 miles on-road or 12,000 hours off-road without the need of ELC Extender. After 600,000 miles or 12,000 hours it is recommended that the coolant be tested for continued use.
- Shell Rotella ELCs patented inhibitors, while providing complete cooling system component protection, also help reduce water pump failures, hard water scale deposits, green goo and improve heat transfer. Tests with Shell Rotella ELC show that heat transfer is about 8% better with Shell Rotella ELC than with conventional heavy duty, silicate-containing coolants.
- Maintenance is simple with Shell Rotella ELC. To use this product just follow your OEMs instructions on how to drain, flush and refill your cooling system. Top up only with Rotella ELC or an equivalent brand of ELC like Caterpillar Extended Life Coolant, Detroit Diesel POWERCOOL® PLUS and Fleetrite® ELC. At every PM or at least twice per year check the colour and freeze point of your coolant. If coolant is red, has no deposits and has a freeze point between -26°C and -51°C then the coolant is considered in good condition for further use. Please note that dilution of Shell Rotella ELC by more than 15% with nonequivalent coolants or water is not recommended. Over-dilution will require initiating SCA use or draining and refilling the cooling system with Shell Rotella ELC.

## Specifications, Approvals & Recommendations

- ASTM D3306, D4985, D6120 (Meets)
- TMC RP 329, RP 338 (Meets)
- Cummins CES 14439 (Approval)
- Navistar MPAPS B-1 (formerly Int CEMS B-1) (Approval)
- CAT EC-1 (Meets)
- Detroit Diesel DFS 93K217 (Meets performance)
- Volvo/Mack (Meets)

- Paccar (Meets)
- Deutz DQC CB-14 (Approval)
- Phosphate free requirement of European OEMs
- Silicate free requirement of Japanese OEMs

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

## Typical Physical Characteristics

Properties	Method	Shell Rotella ELC Concentrate
Code No.		482-005
Colour		Red
Specific Gravity @15.6°C		1.130
Freezing Point °C max	ASTM D1177	Diluted 50/50 -36.7
pH 1:2 dilution with water	ASTM D1287	Diluted 50/50 8.3
Reserve Alkalinity, as received	ASTM D1121	6
Silicate (as Anhydrous Alkali Metasilicate) %		None

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 ELC Concentrate 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 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.

### • Advice re the use of Shell Rotella ELC Extender

Use of Shell Rotella ELC Extender (product code 482-007) is necessary to ensure maximum coolant life and should be added at 500,000 km of coolant life. This product replenishes nitrite levels and should be added at 500,000 km or 6,000 hours. Nitrite is required by all heavy duty OEMs in the USA. Most European OEMs do not require nitrite when an extended life coolant like Shell Rotella ELC is used.

Nitrite added when extender is used at the dosage rate seen below, nitrite level is 400 ppm.

Dosage rate Shell Rotella ELC Extender at 500,000 km of on-road use (3 years or 6,000 hours of off-road use) is as follows:

For cooling system capacity 6-8 gallons/22-30 litres, dose is 0.5 US Quarts

For cooling system capacity 8-13 gallons/30-49 litres, dose is 1 US Quart

For cooling system capacity 22-30 gallons/83-114 litres, dose is 2 US Quarts

Shell Rotella ELC Extender should only be used with Shell Rotella ELC Extended Life Coolants.

Shell Rotella ELC Extender Should not be used in initial fill or for top up.

- **Handling and Safety Information**

Shell Rotella ELC Extended Life Coolant has a shelf life of at least 8 years. Product should be mixed before use. Always dispose of used coolant in accordance with local, provincial and federal guidelines. These products are not to be used to protect the inside of potable water systems against freezing.

#### **Additional Information**

- **Advice**

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