



Lubricants Report



Product Data Sheet from Shell Lubricants

PDS# 5.14.05

ROTELLA ELC*

EXTENDED LIFE COOLANT SYSTEM
PREMIUM EXTENDED LIFE COOLANT/ANTIFREEZE

PRODUCT LINE

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

APPLICATIONS

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 **Rotella ELC**, due to their specific chemistry, are designed to go 1,000,000 km on-road or 12,000 hours off-road with only one **Rotella ELC** Extender addition at 500,000 km or 6,000 hours. After 1,000,000 km or 12,000 hours it is recommended that the coolant be tested for continued use.

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 **Rotella ELC** show that heat transfer is about 8% better with **Rotella ELC** than with conventional heavy duty, silicate-containing coolants.

Maintenance is simple with **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 **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 **Rotella ELC**.

PERFORMANCE BENEFITS

- minimum coolant life of 1,000,000 km with only one **Rotella ELC** Extender addition at 500,000 km
- 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 **Rotella ELC** is used as top-up for conventional coolants SCA's must still be added.

APPROVALS

Rotella ELC Extended Life Coolant/Anti-Freeze meets or exceeds the requirements :

- ASTM D 3306 for automotive service
- ASTM D 4985 for heavy duty diesel service
- ASTM D 6210
- TMC RP 329
- TMC RP 338

Rotella ELC Extended Life Coolant/Antifreeze meets the extended life requirements and chemical requirements of :

- Caterpillar, International, Cummins, Detroit Diesel and Mack
- Phosphate free requirement of European OEMs
- Silicate free requirement of Japanese OEMs

TYPICAL PROPERTIES

Rotella ELC Extended Life Coolant / Antifreeze	Concentrate	Predilute 60 / 40	ASTM Method
Product Code	482-005	482-006	
Colour	Red	Red	
Specific gravity 15.6/15.6 °C	1.130	1.07	
Freezing Point, ° C max.	Diluted 50/50 -36.7	As sold -52	D 1177
PH 1:2 dilution with water	Diluted 50/50 8.3	As sold 8.3	D 1287
Reserve Alkalinity as received	6.0	3.5	D1121
Silicate, % (as Anhydrous Alkali Metasilicate)	None	None	

Use of **Rotella ELC** Extender 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 **Rotella ELC** is used.

Rotella ELC Extender	
Product Code	482-007
Nitrite level **	400 ppm

**Nitrite added when extender is used as per table below.

Rotella ELC Extender should be used in accordance with the following table.

Rotella ELC Extender dosage rate

Dosage of Rotella ELC Extender at 500,000 km of on-road use (three years or 6,000 hours of off-road use).

Cooling System Capacity		Rotella ELC Extender/US Quarts
Gallon	Litres	
6-8	22-30	0.5
8-13	30-49	1
13-22	49-83	1.5
22-30	83-114	2

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

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

HANDLING & SAFETY INFORMATION

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. For information of the safe handling and use of this product, refer to its Material Data Safety Sheet.

Note: Conventional silicate-based coolants have a shelf life of 18 months, but **Rotella ELC Extended Life Coolant** products can be stored for a period up to 8 years, provided the integrity of the container is maintained.

[Visit](#) your nearest Shell Associate or Reseller for more details.

Need more product information? Please the [Shell Customer Service Centre](#) at 1-800-661-1600 or e-mail us at questions@shell.com

MSDS requests? Please call 1-800-661-1600 or fax your request to (403) 691-3997

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