



SHELL ROTELLA[®] ELC EXTENDED LIFE COOLANT/ ANTIFREEZE

Premium Extended Life Coolant/Antifreeze

Product Description

Shell Rotella[®] ELC Extended Life Coolant/Anti-Freeze is a “fill for life” ethylene glycol based coolant for heavy-duty diesel, gasoline and natural gas powered engines. Shell Rotella[®] ELC contains a unique extended life carboxylate inhibitor system and nitrite / molybdate as secondary Shell Rotella[®] ELC meets all the requirements of CAT EC-1, TMC RP 329 and RP 338. Shell Rotella[®] ELC is available as a concentrate and as 50/50 and 60/40 volume mixtures of Shell Rotella[®] ELC with deionized water.

Applications

Shell Rotella ELC Extended Life Coolant/Anti-Freeze has been proven, with over 100 million miles of fleet testing, to provide complete protection of all cooling system components. The inhibitors in ROTELLA ELC, due to their special chemistry, are designed to go 600,000 miles on-road or 12,000 hours off-road with only one Shell Rotella ELC Extender addition at 300,000 miles or 6,000 hours. After 600,000 miles or 12,000 hours it is recommended that the coolant be tested for continued use.

Shell Rotella ELC's patented inhibitors, while providing complete cooling system component protection, also help reduce water pump failures, hard water scale deposits, silicate “green goo” and improve heat transfer. Tests with ROTELLA ELC show that heat transfer is about 8% better with RELC than with conventional heavy duty, silicate-containing coolants.

Maintenance is simple with ROTELLA ELC. To use this product just follow your OEM's instructions on how to drain, flush and refill your cooling system. Top up only with Shell Rotella ELC Pre-diluted 50/50 or an equivalent brand of ELC like Fleetrite[®] ELC. At every PM, or at least twice per year, check the color and freeze point of your coolant. If coolant is red, has no deposits and has a freeze point of between -15°F and -60°F then the coolant is considered in suitable condition for further use. See index for freeze point adjustment chart. Please note that dilution of Shell Rotella ELC by more than 15% with non-equivalent coolants or water is not recommended. Over-dilution will require initiating SCA use or draining and refilling the cooling system with Shell Rotella ELC. If contamination with non-equivalent /non-extended life coolants is suspected, it is recommended the ELC Contamination Test Strip Kit be used to confirm satisfactory carboxylate inhibitor content.

Features and Benefits

- minimum coolant life of 600,000 miles with only one Shell Rotella ELC Extender addition at 300,000 miles.
- 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 non-equivalent coolants will reduce or eliminated 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.

Approvals and Recommendations

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

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

Shell Rotella ELC Pre-diluted 50/50 Extended Life Coolant meets or exceeds:

- ASTM D 4656 for automotive service
- ASTM D 5345 for heavy duty diesel service
- ASTM D 6210
- TMC RP 329
- TMC RP 338

Shell Rotella ELC Extended Life Coolant System meets the extended life requirements and chemical requirements of:

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

Typical Characteristics of Shell Rotella ELC Extended Life Coolant/Anti-Freeze

	Typical Concentrate	Typical 50/50	Typical 60/40
Code No.	94041	94042	94065
Appearance	Red	Red	Red
Specific gravity 60/60 °F	1.130	1.06	1.07
Freezing point, °F (ASTM D 1177)	Diluted 50/50 -34°F	As sold -34°F	As sold -62°F
pH (ASTM D 1287), 1:2 dilution with water	Diluted 50/50 8.3	As sold 8.3	As sold 8.3
Reserve Alkalinity (ASTM D 1121), as received	6.0	As sold 3.0	As sold 3.5
Silicate, % (as Anhydrous Alkali Metasilicate)	None	None	None

For customers requiring bitterant in their coolant see table below for **Shell Rotella ELC Extended Life Coolant/Anti-Freeze** with bitterant added.

Product Name	Product Code	Typical values
Shell Rotella ELC Extended Life Coolant/ Anti-Freeze Extended Life Coolant with Bitterant	94060	See code number 94041 in table above
Shell Rotella ELC Pre-diluted 50/50 Extended Life Coolant/Anti-Freeze Extended Life Coolant with Bitterant	94061	See code number 94042 in table above

Use of **Shell Rotella ELC Extender** is recommended to ensure maximum coolant life. This product replenishes nitrite levels and should be added at 300,000 miles or 6,000 hours of coolant service. Nitrite serves as secondary protection against liner cavitation. Most European engine OEM's do not require nitrite when an extended life coolant like Rotella ELC is used.

Typical Characteristics of Shell Rotella ELC Extender	
	Typical Values
Code number	94043
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.

Shell Rotella ELC Extended Life Coolant/Anti-Freeze Extender dosage rate		
Dosage of Shell ROTELLA ELC Extender at 300,000 miles of on-road use (three years or 6,000 hours of off-road use).		
Cooling System Capacity		ROTELLA ELC Extender
Gal.	(L)	Qty.
6-8	22-30	0.5 quarts
8-13	30-49	1 quarts
13-22	49-83	1.5 quarts
22-30	83-114	2 quarts

Shell Rotella ELC Extender should only be used with **Shell Rotella ELC Extended Life Coolant/Anti-Freeze**. **Shell Rotella ELC Extended Life Extender** should not be used at initial fill or for routine top up.

Handling and Safety Information

Shell Rotella ELC Extended Life Coolant/Anti-Freeze Extended Life Coolant has a shelf life of at least 8 years. Always dispose of used coolant in accordance with local, state and federal guidelines. These products are not to be used to protect the inside of potable water systems against freezing. For information on the safe handling and use of this product, refer to its Material Safety Data Sheet at

<http://www.equivashellmsds.com>. For more information and availability, call **1+800-782-7852** or visit the World Wide Web: <http://www.shell-lubricants.com/>.