



Shell Rotella *Ultra ELC* Antifreeze/Coolant Concentrate

Next Generation OAT Extended Life, NAP-Free Heavy Duty Ethylene Glycol Engine antifreeze Concentrate

Shell Rotella Ultra ELC Antifreeze Concentrate is an Extended Life Ethylene Glycol antifreeze for Heavy Duty Diesel, Gasoline, and Natural gas Powered Engines. Shell Rotella Ultra ELC Antifreeze Contains OAT Corrosion Inhibitor Technology That Provides Effective corrosion protection of Engine and Cooling System Metals. The Product is Free of nitrites, amines, phosphates (NAP), borates and silicates. Shell Rotella Ultra ELC Antifreeze Concentrate is Suitable for Both Heavy Duty and Light Duty Applications Without supplemental Coolant Additives (SCAs), Making it Ideal for use in Mixed Fleet Applications. It is a Concentrate and Should be diluted With Water. For Best Results, consideration Should be Given to use demineralised or de-ionized Water if Possible. In Markets Where Shell Rotella Ultra ELC Antifreeze Concentrate is not Available, use Shell HD Ultra ELC Antifreeze Concentrate.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

■ All-Climate Year Round Performance

When Blended With 50% Water, Shell Rotella Ultra ELC Antifreeze Provides freeze Protection Down to -37°C and boilover Protection up to +129°C (With the use of a 103.4 kPa Pressure cap).

■ Extended Life Capability

Shell Rotella Ultra ELC Antifreeze Typically Provides up to 12,000 Hours or 1 Million km in Heavy Duty Applications Under Normal Operating Conditions, Provided the Coolant is Kept in Good Condition.

■ Field Compatibility

Shell Rotella Ultra ELC Antifreeze is Miscible and Compatible With Other Engine antifreeze of Similar Type; Although to get the Best Performance From the Long Life Capabilities, it is Always Recommended to not dilute Shell Rotella Ultra ELC Antifreeze With Other Coolants. Should the circumstances dictate, it is Also Compatible With Standard Heavy Duty SCAs, Coolant Filters and Hard Water.

Main Applications

■ Heavy Duty Diesel or Gasoline Engine antifreeze

Shell Rotella Ultra ELC Antifreeze Concentrate is Formulated to be an Extended Life Coolant in Heavy Duty Applications, Found in on-Road, off-Road, Marine, farm, Mining and Construction Equipment.

Shell Rotella Ultra ELC Antifreeze Concentrate Contains Organic Additive Technology Corrosion Inhibitors Along With molybdate to Provide Extra Protection to Cylinder Liners Found in Heavy-Duty Applications. It Will not Require an Initial Charge or supplemental Coolant Additives (SCA).

Shell Rotella Ultra ELC Antifreeze Concentrate Also Provides Protection in Light Duty Engines Making it Highly Suitable for Mixed Fleets (Light Duty as Well as Heavy Duty Gasoline and Diesel engines).

Specifications, Approvals & Recommendations

- Astm D3306, D4985, D6210
- AS/NZS 2108.1:1997 "Type A"
- Caterpillar EC-1 (Sections 2.3 – 4.5 incl.)
- Cummins Bulletin 3666132 and 14603
- DAF MAT 74002
- Detroit Diesel 7SE298 and 93K217
- Freightliner 48-22880
- General Motors 1825M, 1899M, Heavy Truck
- International Truck & Engine CEMS B-1
- JIS K 2234
- Kenworth R026-170-97
- John Deere JDM H24
- Landrover
- Mack Truck 014GS17004
- MAN 324
- Mercedes-Benz DBL 7700

- MTU MTL 5048
- PACCAR CS0185
- Peterbilt 8502.002
- SAE J1034
- Scania TB1451
- TMC RP 329
- Volvo

For a Full Listing of Equipment Approvals and Recommendations, Please Consult Your Local Shell Technical Help Desk, or the OEM Approvals Website.

Typical Physical Characteristics

Properties		Method	Shell Rotella Ultra ELC Antifreeze/Coolant Concentrate
Appearance, visual Color		Visual	Yellow
Ash Content	% w/w	ASTM D1119	5.0 max
Flash Point	°C	ASTM D92	116 min
Freeze Point (50% by Volume)		ASTM D1177	-37°C
pH (50% vol)		ASTM D1287	8.0 - 9.0
Reserve Alkalinity	ml 0.1N HCL	ASTM D1121	4.0 min
Shell Life (unused)			5 years
Silicon as silicate	ppm	ASTM D6130	<10
Specific Gravity	@15.6°C	ASTM D1122	1.120 - 1.140

These Characteristics are Typical of Current Production. While Future Production Will Conform to Shell's Specification, Variations in These Characteristics may Occur.

Health, Safety & Environment

■ Health and Safety

Shell Rotella Ultra ELC Antifreeze 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 Material Safety Data Sheet, Which can be Obtained From Your Shell Representative.

■ Protect the Environment

Take Used oil to an Authorized Collection point. Do not Discharge Into Drains, Soil or Water.

■ Handling and Protective Measures

The usual Precautions for Handling Chemicals Must be Observed. In Particular the Place of Work Must be Well ventilated, the Skin Protected and Safety glasses Worn at all Times. Avoid Contact With the Skin. This Product Contains a bitterant Thus Reducing the Chance of Accidental ingestion. The Product is Based on monoethylene Glycol and Should be Kept From children and Animals to Prevent Exposure.

■ Storage Requirements

Store at Ambient Temperatures and Limit Periods of Exposure to Temperatures Above 35°C.

- **Typical Freeze and Boilover Protection Mixing Chart - Shell Rotella Ultra ELC Antifreeze**

Shell Rotella Ultra ELC Antifreeze : 40% Antifreeze / 60% Water

Freeze Point Protection (°C) Using a 103.4 kPa Pressure cap : -24.4

Boilover Protection (°C) Using a 103.4 kPa Pressure cap : +106.7

Shell Rotella Ultra ELC Antifreeze : 50% Antifreeze / 50% Water

Freeze Point Protection (°C) Using a 103.4 kPa Pressure cap : -37

Boilover Protection (°C) Using a 103.4 kPa Pressure cap : +129

Shell Rotella Ultra ELC Antifreeze : 60% Antifreeze / 40% Water

Freeze Point Protection (°C) Using a 103.4 kPa Pressure cap : -52.0

Boilover Protection (°C) Using a 103.4 kPa Pressure cap : +132

Additional Information

- **Advice**

Product recommendations for applications and specifications not covered here may be obtained from your Shell representative.