Shell Rotella Ultra ELC Antifreeze/ Coolant Pre-Diluted 50/50

Next Generation OAT Extended Life, NAP-Free Heavy Duty Ethylene Glycol Engine Coolant premixed and Ready to use

Shell Rotella Ultra ELC Coolant Pre-diluted 50/50 is an Extended Life Ethylene Glycol Coolant for Heavy Duty Diesel, Gasoline, and Natural gas Powered Engines. Shell Rotella Ultra ELC Coolant Pre-diluted 50/50 Contains OAT Corrosion Inhibitor Technology That Provides Effective corrosion protection of Engine and Cooling System Metals. The Product is Free of nitrates, amines, phosphates (NAP), borates and silicates. Shell Rotella Ultra ELC Coolant Pre-diluted 50/50 is Suitable for Both Heavy and Light Duty Applications Without supplemental Coolant Additives (SCAs), Making it Ideal for use in Mixed Fleet Applications. Shell Rotella Ultra ELC Coolant Pre-diluted 50/50 is premixed and Ready to use. It Requires no Further Dilution. In Markets Where Shell Rotella Ultra ELC Coolant Pre-diluted 50/50 is not Available, use Shell HD Ultra ELC Coolant Pre-diluted 50/50.

Performance, Features & Benefits

- **All-Climate Year Round Performance**
  As sold Rotella Ultra ELC Coolant Pre-diluted 50/50 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 Coolant Pre-diluted 50/50 Typically Provides up to 12,000 Hours or 1 Million km in Heavy Duty Applications Under Normal Operating Conditions, Provided the Coolant is Checked and Kept in Good Condition.

- **Field Compatibility**
  Shell Rotella Ultra ELC Coolant Pre-diluted 50/50 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 Coolant Pre-diluted 50/50 With Other Coolants. It is Also Compatible With Standard Heavy Duty SCAs, Coolant Filters and Hard Water Should circumstances dictate It’s use in That Environment.

Main Applications

- **Heavy Duty Diesel or Gasoline Engine antifreeze**
  Shell Rotella Ultra ELC Coolant Pre-diluted 50/50 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 Coolant Pre-diluted 50/50 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 Additional supplemental Coolant Additives (SCAs).

Shell Rotella Ultra ELC Coolant Pre-diluted 50/50 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
Typical Physical Characteristics

<table>
<thead>
<tr>
<th>Properties</th>
<th>Method</th>
<th>Shell Rotella Ultra ELC Antifreeze/ Coolant Pre-diluted 50/50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance, visual Color</td>
<td>Visual</td>
<td>Yellow</td>
</tr>
<tr>
<td>Ash Content % w/w</td>
<td>ASTM D1119</td>
<td>2.5 max</td>
</tr>
<tr>
<td>Freeze Point as sold</td>
<td>ASTM D1177</td>
<td>-37°C</td>
</tr>
<tr>
<td>pH as sold</td>
<td>ASTM D1287</td>
<td>8.0 - 9.0</td>
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<tr>
<td>Reserve Alkalinity ml 0.1N HCL</td>
<td>ASTM D1121</td>
<td>2.0 min</td>
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<tr>
<td>Shell Life (unused)</td>
<td></td>
<td>5 years</td>
</tr>
<tr>
<td>Silicon as silicate ppm</td>
<td>ASTM D6130</td>
<td>&lt;10</td>
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<tr>
<td>Specific Gravity @15.6°C</td>
<td>ASTM D1122</td>
<td>1.070 - 1.080</td>
</tr>
</tbody>
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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 Coolant Pre-diluted 50/50 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 W ith soap and W ater.
  - Guidance on Health and Safety is Available on the Appropriate Material Safety Data Sheet, W hic h can be O btained From Your Shell Representative.

- **Protect the Environment**
  - Take Used oil to an Authorized Collection point. Do not Discharge Into Drains, Soil or W ater.

- **Handling and Protective Measures**
  - The usual Precautions for Handling Chemicals Must be O bserved. In Particular the Place of W ork M ust be W ell ventilated, the Skin Protected and Safety glasses W orn at all Times. Avoid Contact With the Skin. This Product Contains a bitterant Thus Reducing the Chance of A ccidental ingestion. The Product is Based on monoethylene Glycol and Should be K ept From children and A nimals 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 Coolant Pre-diluted 50/50**
  - Shell Rotella Ultra ELC Coolant Pre-diluted 50/50 as sold:
    - Freeze Point Protection (°C) Using a 103.4 kPa Pressure cap : -37
    - Boilover Protection (°C) Using a 103.4 kPa Pressure cap : +129
Additional Information

- Advice

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