



# Rotella® Ultra ELC Antifreeze Concentrate

*Next Generation OAT Extended Life, NAP-Free heavy duty ethylene glycol engine antifreeze concentrate*

Rotella Ultra ELC Antifreeze Concentrate is an extended life ethylene glycol antifreeze for heavy duty diesel, gasoline, and natural gas powered engines. 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. 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 outside North America where Rotella Ultra ELC Antifreeze Concentrate is not available, use Shell HD Ultra ELC Antifreeze Concentrate.

## Applications

### *Heavy duty diesel or gasoline engine antifreeze*

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.

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) in the future.

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).

conditions, provided the coolant is kept in good condition.

- **Field Compatibility**

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 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.

**Rotella Ultra ELC Antifreeze is part of the Shell family of heavy-duty lubricants and coolants for the heavy duty market.**

## Performance Features and Benefits

- **All-Climate year round performance**  
When blended with 50% water, Rotella Ultra ELC Antifreeze provides freeze protection down to -34.6°F and boil over protection up to +265°F (with the use of a 15 lb. pressure cap).
- **Extended Life Capability**  
Rotella Ultra ELC Antifreeze typically provides up to 12,000 hours or 600,000 miles in heavy duty applications under normal operating

## Specification and Approvals

Rotella Ultra ELC Antifreeze Concentrate has been formulated to meet the following coolant specifications and is recommended for these specifications:

OEM / Industry	Specification
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
<b>OEM / Industry</b>	<b>Specification</b>
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	MAN 324
Mercedes-Benz	DBL 7700
MTU	MTL 5048
PACCAR	CS0185
Peterbilt	8502.002
SAE	J1034,
Scania	TB1451
TMC	RP 329
Volvo	

### Advice

Advice on applications not covered in this leaflet may be obtained from your Shell Representative.

### Health and Safety

Guidance on Health and Safety are available on the appropriate Material Safety Data Sheet that can be obtained from your Shell representative.

### 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 95°F.

### Protect the environment

Take used coolant to an authorised collection point. Do not discharge into drains, soil or water.

### Typical Physical Characteristics

	Rotella Ultra ELC Antifreeze	Test Methods
Appearance, visual colour	Yellow	Visual
Ash Content (% w/w)	5.0 Max	ASTM D 1119
Flash Point (°C)	116 Min	ASTM D 92
Freeze point (50% vol)	-34.6°F	ASTM D 1177
pH (50% vol)	8.0 – 9.0	ASTM D 1287
Reserve Alkalinity (ml 0.1N HCL)	4.0 Min	ASTM D 1121
Shelf life (unused)	5 years	
Silicon as silicate (ppm)	<10	ASTM D 6130
Specific Gravity (60.08°F)	1.120 – 1.140	ASTM D 1122

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

### Typical Freeze and Boilover Protection Mixing Chart

Rotella Ultra ELC Antifreeze	Freeze Point Protection* (°F)	Boilover Protection* (°F)
40% Antifreeze / 60% Water	-11.92	+224.06
50% Antifreeze / 50% Water	-34.6	+264.2
60% Antifreeze / 40% Water	-61.6	+269.6

\*Using a 15 lb. pressure cap