



ES Optimax™ Antifreeze Coolant

Ethylene Glycol Concentrate & Premix

FLEETGUARD ES Optimax™ EG Antifreeze/Coolants are Extended Life formulations that contain Ethylene Glycol base fluids and are designed specifically for use in heavy-duty diesel engines. **ES Optimax™ EG Antifreeze Coolants** are fully formulated with Organic Acid Inhibitors, and provide superior liner pitting and corrosion protection in diesel engines. **ES Optimax™** antifreeze/coolants are phosphate, borate, amine, and silicate free, and contain proprietary anti-scale additives that eliminate the need for deionized water.

FLEETGUARD ES Optimax™ EG Concentrate mixes readily with clean tap water or demineralized water, while **ES Optimax™ EG Premix** is formulated with demineralized water and is ready to use. **ES Optimax™** coolants are compatible with conventional antifreeze products and liquid SCA's and standard water filters; however, mixing with conventional antifreeze may reduce the extended life characteristics of the product. **ES Optimax™ EG Antifreezes** are universal products highly recommended for use in all heavy-duty diesel engines, and also for use in automobile and light duty applications.

FLEETGUARD ES Optimax™ EG Antifreeze Coolants meet or exceed the performance requirements of the following specifications.

TMC RP 338
TMC RP 329
ASTM D-6210
ASTM D-4656
ASTM D-4985
ASTM D-3306
GM1899
GM1825M

Cummins CES14603
Caterpillar EC-1
Detroit Diesel 7SE298
MTU Germany
John Deere H24A1, H24C1
Case New Holland
Komatsu
SAEJ1034

International B-1, Type III
Freightliner 48-22880
Volvo
PACCAR
MACK
Waukesha 4-1974D
Mitsubishi
Thermo-King

TYPICAL PROPERTIES		EG Concentrate	EG Premix 50/50	EG Premix 60/40
Color	Visual	Red	Red	Red
Specific Gravity 60°F (15°C)	D1122	1.130	1.080	1.090
Pounds per Gallon, 60°F (15°C)	-----	9.43	9.01	9.09
pH (Undiluted)	D1287	9.0	8.7	8.7
Reserve Alkalinity (Undiluted)	D1121	10.0	5.0	5.0
Freeze Point, (Undiluted)	D1177	8°F (-13°C)	-34°F (-37°C).	-65°F (-54°C)
Boiling Point, (Undiluted)	D1120	338°F (170°C)	226°F (108°C).	230°F (110°C).
Water, wt % (Approx.)	D1123	2.5	48.0	38.0
SCA Units per gallon	-----	5.0	2.5	2.5
Glassware Corrosion Test	D1384	Pass	Pass	Pass
Aluminum Corrosion Test	D4340	Pass	Pass	Pass
Simulated Service Test	D2570	Pass	Pass	Pass
Aluminum Water Pump Test	D2809	Pass	Pass	Pass
Silicates	-----	None	None	None

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**A Global Formulation
Meeting North American European
and Asian Heavy Duty Diesel
Extended Life Requirements**

- **600,000 mile or 12,000 hour Protection**
- **Borate, Phosphate and Silicate Free**
- **Ultimate Liner Pitting Protection**

ES Optimax™ Ethylene Glycol Concentrate		ES Optimax™ Ethylene Glycol Premix 50/50	
CC2784	Bulk	CC2789	Bulk
CC2783	275 Gallon Tote (1040 liters)	CC2788	275 Gallon Tote (1040 liters)
CC2782	55 Gallon Drum (208 liters)	CC2787	55 Gallon Drum (208 liters)
CC2780	1 Gallon Bottle (3.785 liters)	CC2785	1 Gallon Bottle (3.785 liters)