



ES Compleat™

Lifetime Heavy Duty Fully Formulated Antifreeze/Coolant

- Fully formulated extended Life-of-the-engine hybrid coolant with 1,600,000km useful life under normal conditions
- Minimal maintenance - does not require SCA pre charge
- Test at 250,000km, 4,000 hours or once/ year; only add SCA when needed
- Provides freeze protection up to -37 °C at 50/50 premix and -54 °C at 60/40 premix
- Maximum corrosion and liner pitting protection with conventional heavy duty chemical inhibitors and organic acids
- Fully meets requirements of ASTM D-6210, Cummins CES14603, CES14439, AFNOR NF R15-601
- Meets many leading OEM requirements including: Case New Holland, CAT, Cummins, DDC, EMD, Freightliner, International, John Deere, Komatsu, Kubota, Mack, Mitsubishi, PACCAR, Volvo, Waukesha
- Available based on Ethylene Glycol (EG) or Propylene Glycol (PG), in Concentrate and Premix
- Always maintain the system coolant level by topping up the system with supplemental coolant additive (SCA)



ES Compleat™ is formulated specifically for use in heavy-duty diesel engines. These products contain conventional heavy-duty chemical and organic corrosion inhibitors, which provide enhanced protection for diesel engines from liner pitting and hard water scale deposits. In addition, ES Compleat™ products provide the highest water pump protection available in the marketplace. Fleetguard ES Compleat™ Concentrate mixes readily with clean tap water or, better still, de-mineralised water (50/50 mix), while ES Compleat™ Premix is fully formulated with de-mineralised water and ready to use.

ES Compleat™ is fully compatible with all other antifreeze/coolants and corrosion inhibitor packages. ES Compleat™ Antifreezes are universal products highly recommended for use in all heavy-duty diesel engines. ES Compleat™ is formulated to last till engine rebuilt and can be used until contamination levels are exceeded.

Use ES Compleat™ to provide superior engine protection, extend service intervals...

ES Compleat™ is available in the following part numbers

| | EG Concentrate | *EG PreMix 50/50 | *EG PreMix 40/60 | PG Concentrate | *PG PreMix 50/50 |
|--------------------|----------------|------------------|------------------|----------------|------------------|
| 5 Liter | CC2747M | CC2748M | N/A | CC2751M | CC2752M |
| 20 Liter | CC2749M | CC2750M | N/A | CC2753M | CC2754M |
| 208 Liter (Drum) | CC2821M | CC2826M | CC2919 ESD | CC2831M | CC2836M |
| 1.000 Liter (Tote) | CC2851M | CC2852M | N/A | CC2853M | CC2854M |
| Bulk | CC2822M | CC2827M | N/A | CC2832M | CC2837M |

* The first number indicates % glycol followed by the % water.

... and to simplify your cooling system maintenance program.

| Typical properties | ASTM test no. | EG Conc. | EG Premix 50/50 | EG Premix 40/60 | PG Conc. | PG Premix 50/50 |
|----------------------------|---------------|----------|-----------------|-----------------|----------|-----------------|
| Colour | Visual | Blue | Blue | Blue | Blue | Blue |
| Specific Gravity @15°C | D1122 | 1.13 | 1.07 | 1.06 | 1.05 | 1.045 |
| pH | D1287 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 |
| Reserve Alkalinity (ml) | D1121 | 10.0 | > 5.0 | > 5.0 | 10.0 | > 5.0 |
| Freeze point (°C) | D1177 | < -14 | < -36 | < -24 | < -56 | < -32 |
| Boiling point (°C) | D1120 | > 174 | > 108 | > 106 | > 160 | > 105 |
| Water, weight (%) | D1123 | 4 | < 47 | 59 | 4 | < 47 |
| Glycol, weight (%) | ----- | > 95 | > 51 | 41 | > 95 | > 51 |
| Glassware corrosion test | D1384 | Pass | Pass | Pass | Pass | Pass |
| Water pump cavitation test | D2809 | Pass | Pass | Pass | Pass | Pass |
| Aluminium corrosion test | D4340 | Pass | Pass | Pass | Pass | Pass |
| Simulated service test | D2570 | Pass | Pass | Pass | Pass | Pass |
| Ash content (%) | D1119 | < 5 | < 2.5 | < 2.5 | < 5 | < 2.5 |
| Chloride (ppm) | ----- | < 25 | < 25 | < 25 | < 25 | < 25 |

Frequently asked questions

■ How do I have to use ES Compleat™ concentrate?

In Heavy Duty applications it is necessary to maintain an antifreeze/glycol (EG or PG) concentration of 40 to 60 %, depending on your work environment. A 50/50 mix of good quality water, or demineralised water, and antifreeze is preferred.

■ Do I also need to apply a 50/50 mix in hot climate conditions?

Besides offering freeze protection, antifreeze also increases the boiling point of the coolant to avoid boiling on hot surfaces (i.g. cylinder heads) in the cooling system. Antifreeze also supports the suppression of liner pitting and cooling system corrosion.

■ What's the major benefit of using ES Compleat™ Premix products?

ES Compleat™ Premix is an easy and ready-to-use product, eliminating the risk of diluting the system. It contains the appropriate amount of inhibitors and anti-freeze (EG or PG) for your initial cooling system fill and worry-free top-up afterwards.

■ What are the benefits of using ES Compleat™ PG?

Propylene Glycol (PG) has a much lower toxicity than Ethylene Glycol (EG). PG is considered safer for use in the environment primarily because of the lower acute toxicity. PG is not considered a hazardous pollutant. OSHA has not seen the need to set a limit regarding human exposure. These benefits make PG a more user and environmentally friendly product.

Fleetguard's ES Compleat™ EG and PG

Extended Life Coolants meet or exceed the performance requirements of the following:

TMC RP-338 Extended Life ■ TMC RP-329 (EG) ■ THC RP-330 (PG) ■ ASTM D-4985 (EG) ■ D-5216 (PG) ■ ASTM D-6210 (EG) ■ ASTM-6211 (PG) ■ CID-A-A-52624 ■ Waukesha® 4-1974D ■ GM6038M ■ Cummins® SB 3666132 ■ Cummins® CES 14603 ■ Caterpillar® ■ Detroit Diesel® 7SE298 ■ John Deere® 8650-5 ■ Case New Holland® Navistar® ■ Freightliner® 48-22880 ■ Volvo® ■ PACCAR® ■ MACK® 014617004 ■ EMD M.I. 1784E



For more information, visit cumminsfiltration.com

LT15070GB
©2016 Cummins Filtration