



## Shamrock EC-1 Antifreeze/Coolant

Shamrock EC-1 Antifreeze/Coolant incorporates cutting-edge inhibitor technology to provide a reasonably priced long life antifreeze. Shamrock EC-1 contains a hybrid organic acid technology (HOAT) additive/inhibitor package formulated with a proprietary stabilization system to improve the durability of its carboxylate additive and extend its range of compatibility with both conventional inorganic salts and OAT-type antifreezes, providing a normal highway service life of up to 600,000 miles hours with one pre-charge. However the charge level should be checked(with test strip) every 150,000 miles or 1500 hours, especially in severe service applications and where de-ionized water is not used. Shamrock EC-1 contains no phosphates, borates, nitrates, or silicates. The extended life additive package possesses multiple complex carboxylic acid derivatives along with nitrite to protect all six standard metal alloys (brass, copper, steel, solder, cast iron and aluminum). These low-foaming carboxylates and other proprietary ingredients not only provide broad-range metal protection but also guard the cooling system against corrosion and cavitation erosion. In addition it contains additives to minimize hot surface scaling while also preventing heat transfer surface fouling due to minor oil leakage. Can be made with Ethylene Glycol base or environmentally favorable Propylene Glycol. Meets or exceeds the following specifications. Contains Bitterant.

ASTM D3306	ASTM D4985	ASTM D4656(50%)
ASTM D5345(50%)	ASTMD6210	ASTM D6211(w/PG)
ATA TMC RP 329B	Caterpillar EC-1	Case Corp MS1710
Chrysler MS-7170	Cummins 14603	Cummins 90T8-4
Detroit Diesel 7SE298	Federal A-A 870	Ford ESD-M97B44-A
Ford New Holland 9-86	Freightliner 48-22880	GM1899M
GM6043	John Deere H-5	John Deere 8650-5
Navistar B1 (B5-009GO)	Mack Truck 014GS17004	Mercedes

Typical Properties(when mixed to 50% with Deionized water):

Parameter	Method	Typical Value with 50% water
Specific Gravity	D1122	1.06
Foam Test	D92	250F Min.
Foam Test	D1881	45 ml/2.7 sec., Max
pH	D1127	9.0
Reserve Alkalinity	D1121	8.0 M
Freeze Point	D1177	Minus 34F
Boiling Point	D1120	263F Min
Glassware Corrosion Test	D2809	Pass
Aluminum Corrosion Test	D4340	Pass
Simulated Service Test	D2570	Pass