## **Extended Life Antifreeze/Coolant**

Our Extended Life Antifreeze/Coolant contains a proprietary hybrid organic acid technology (HOAT) inhibitor system that is significantly more durable that conventional additive systems, resulting in a 5-year, 80,000 km service life. This Extended Life Antifreeze/Coolant contains low phosphates, silicates, nitrates and amines. It is a balanced combination of organic an inorganic additives, a true hybrid, and is compatible with both organic acid long life coolants and conventional inorganic salt coolants. In addition, this Extended Life Antifreeze/Coolant will not cause turbidity, precipitation or inhibitor effectiveness reduction when mixed with carboxylate-based coolants such as Dex-Cool or Texaco Extended Life nor with conventional coolants such as Prestone, Zerex and Peak. It is ideal for use in initial fills, coolant change-outs or top-offs.

This Extended Life Antifreeze meets ASTM D 3306 (Automotive Prediluted Antifreeze), and ASTM D 4985 (Heavy-Duty Prediluted Antifreeze).

It also meets or exceeds the following industry specifications as a concentrate or pre-diluted antifreeze/coolant.

- ASTM D 1384, D 2809, D 2570, D 3306, D 4340, D 4985
- TMC of ATA RP 329 Type A/302A-1\*
- SAE J1034
- GM 1825M, 1899M and 6277M
- Cummins 90T8-4, 90T8-4
- Detroit Diesel 7SE298
- Caterpillar ELC
- Ford ESE-M97B44-A; WSE-M97B44-B
- Chrysler MS9769
- J.I. Case JIC-501

\*The Maintenance Council of the American Trucking Assoc. Antifreeze also meets the non-phosphate requirements of European OEM's and non-silicate requirements of Japanese OEM's

## BOIL/FREEZE PROTECTION MAXIMUM FREEZE PROTECTION IS AT 70%

Percentage	Free	zing Point	Boilir	ng Point*
Antifreeze	°F	°C	°F	°C

50 - 34 max. -36 max. 226 min. 107 min.

\*Boiling point shown using conventional 15 psi radiator cap.

## PHYSICAL PROPERTIES

Antifreeze Glycols	mass %	95.0 min.
<b>Corrosion Inhibitors</b>	mass %	2.2
Water	mass %	2.8
Flash Point	°F	250
Weight per gallon		
@ 60° F-16° C	lbs.	9.35-9.45
Silicates	mass %	Nil

Used antifreeze coolant in most states is not hazardous unless it contains more than 5 ppm of lead. We recommend that spent coolant never be disposed of by dumping into a storm sewer or onto the ground. Instead, contact your local municipality for instructions on where to and how to properly dispose of this coolant and protect our environment.

## **Extended Life Antifreeze/Coolant Product Data Sheet**

Characteristic	ASTM Specifications	Company Typicals	ASTM Method
Chloride	25 ppm, max.	<25	D3634
Specific gravity, 60/60°F	1.115 -1.125	1.120	D1122
Freezing point, 50% V/V	-34°F/-36°C max.	-34°F/-36°C	D1177
Boiling Point, undiluted	325°F/162°C min.	330°F/164°C	D1120
Boiling Point, 50% V/V	226°F/107°C min.	226°F/107°C	D1120
Effect on engine or			
vehicle finish	no effect	no effect	-
Ash content, mass %	5 max.	< 3	D1119
pH, 50% V/V	9.5-10.5	9.5-10.2	D1287
Reserve alkalinity*	3 ml min.	3-5	D1121
Water mass %	5 max.	3.5 max.	D1123
Color	distinctive	Green, orange, red or fuchia	-
Effect on nonmetals	no adverse effect	no adverse effect	-
Storage stability	-	> 1 year	-
Foaming	150 mi vol., max.	30-40 ml.	D1881
	5 sec. break, max.	1.5-3.0 sec.	D1881
Cavitation-erosion rating	8 min.	9	D2809

\*Reserve alkalinity (RA) is a term used to indicate the amount of alkaline inhibitors present in an antifreeze formulation. It is incorrect to relate a high RA with a high-quality antifreeze. Present, state-of-the-art antifreeze formulations contain many new inhibitors which give added protection to certain metals but do not raise the RA numbers.

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	Weigh loss (Mg/Specimen)	
Glassware Corrosion Test	Spec.	Actual
(ASTM D1384)	-	
Copper	10	1
Solder	30	5
Brass	10	0
Steel	10	-1
Cast Iron	10	1
Aluminum	30	4
Simulated Service Test		
(ASTM D2576)		
Copper	20	5
Solder	60	24
Brass	20	7
Steel	20	5
Cast Iron	20	7
Aluminum	60	14
Hot Surface Aluminum Corrosion	mg/cm²/wk	
(ASTM D4340)		
Specimen weight loss	1.0	< 0.5

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