



Road King Technical Bulletin

Innovative Fluids, Road King coolant is designed to meet the special needs of higher mileage applications, new cooling systems can also benefit from its unsurpassed freeze protection, enhanced corrosion protection, and excellent anti-boil performance. **Road King** antifreeze coolant is an ethylene glycol based formulation which can be used in all makes and models of vehicles. It is formulated with **Alugard** compatibility additive to improve performance when mixing with other coolant types. The patented* chemistry protects all cooling system metals from corrosion including aluminum. The ASTM test data shown on this sheet reflects the high performance corrosion inhibitor package.

When diluted 50% with water, **Road King** protects modern engines from winter freezing and summer boil over. The chart at the top right provides mixing information. Clean tap water or demineralized water is recommended for dilution. A 40% to 70% concentration range is suggested for optimum corrosion protection. **Road King** with **Alugard®** is compatible with major American brands of ethylene glycol based coolant. It contains a high quality defoamer and will not harm gaskets, hoses, plastics or original vehicle finishes.

Road King engine coolant has been dyed yellow to assure color compatibility with a wide range of coolants. It has unsurpassed freeze and boil protection. Innovative Fluids recommends the universal use of Road King coolant for all makes and all models of vehicles designed to use an ethylene glycol based engine coolant after ASTM D3306. **Road King** coolant can be used in gasoline and diesel engines.

Innovative Fluids has conducted testing to support Road King coolant performance for this application. However, it is important to note that, other than where we have formal approvals, vehicle manufacturers have neither evaluated nor approved Road King Coolant. Innovative Fluids stands behind all of its products, including Road King Coolant. The universal use of Road King Coolant in automotive applications is recommended and supported by Innovative Fluids. Many consumers have chosen to take advantage of this level of performance in newer applications.

Call 1-800-889-2110 with questions

Road KingTM Antifreeze / Coolant

5 Years / 150,000 miles / 3,000 hours

Road King Antifreeze/Coolant Boil/Freeze Protection		
% Antifreeze	Freezing Point, °F/°C	Boiling Point**, °F/°C
33	0/-17	256/123
40	-12/-24	260/126
50	-34/-36	265/128
60	-54/-48	271/133
70*	-90/-67	277/135

* Maximum freeze protection is at 70%.

** Boiling point shown using conventional 15 psig radiator cap.

Road King Typical Physical Properties		
Antifreeze Glycols	mass %	96.0
Corrosion Inhibitors	mass %	2
Water	mass %	2
Flash Point	°F/°C	250/121
Weight per gallon @ 60°F/16°C	lbs / KG	9.363 / 4.247

Road King Aluminum Water Pump Tests		
ASTM D2809 Pump Cavitation (Extended Test)		
Test Period	Results	Specification
100 hours	8	meets

ASTM cavitation corrosion rating: 10 - perfect 1 - perforated

Innovative Fluids recommends that spent coolant never be disposed of by dumping into a septic system, storm sewer or onto the ground. Instead, contact your state or local municipality for instructions on where to and how to properly dispose of this coolant and protect our environment.

If any coolant is spilled onto the ground, contain the spill and call the state authorities and ask for proper instruction on how to clean up the spill.

Characteristics	Specifications	Typicals	ASTM Method
Chloride	25 PPM, max.	<25	D3634
Silicon	250 PPM, max.	<250	-
Specific gravity, 60/60° F	1.110 – 1.145	1.1305	D1122
Freezing point, 50% V/V	-34°F/-36°C	-34°F/-36°C	D1177
Boiling point, undiluted	325°F/162°C	325°F/162°C	D1120
Boiling point, 50% V/V	226°F/107°C	226°F/107°C	D1120
Effect on engine or vehicle finish	No Effect	No Effect	-
Ash content, mass %	5 max	1.1	D1119
pH, 50% V/V	7.5 – 11.0	10.4	D1287
Reserve alkalinity*	Report	11.4	D1121
Water mass %	5 max.	2	D1123
Color	Distinctive	Yellow	-
Effect on nonmetals	No Adverse Effect	No Adverse Effect	-
Storage stability	-	> 2 years	-
Foaming	150 ml Vol., max. 5 sec. Break, max.	75 ml 2 sec.	D1881 D1881
Cavitation-erosion rating	8 - 10	8	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 number.

Typical ASTM Corrosion Test Results			
	Weight Loss Mg/Specimen		
Glassware Corrosion Test	Spec.	Actual	ASTM Method
Copper	10	1	D1384
Solder	30	2	
Brass	10	1	
Steel	10	0	
Cast iron	10	2	
Aluminum	30	0	
Simulated Service Test			
Copper	20	2	D2570
Solder	60	3	
Brass	20	3	
Steel	20	1	
Cast iron	20	4	
Aluminum	60	2	
Hot Surface Corrosion	mg/cm ² /wk		
Specimen weight loss	1.0	0.1	D4340