



Antifreeze and Coolant

Technical Data Sheet

Description

Road King Antifreeze and Coolant is a premium antifreeze/coolant formulated from ethylene glycol. It contains an inhibitor package designed to assure anti-foaming properties as well as rust and corrosion protection from brass, copper, solder and aluminum. In view of its low concentration of silicate, Road King Antifreeze and Coolant is recommended for use in Cummins and similar heavy duty diesel engines. It is also appropriate for use with industrial plant systems antifreeze, rust or corrosion protection.

Specifications

- ASTM D 3306
- ASTM D 4985
- ASTM D 5345
- ASTM D 4656
- ASTM D 6210
- GM 6043M
- GM 1825M
- GM 1899M
- ATA RP 302A
- SAE J814C
- SAE J1034
- SAE J1038
- SAE J1941
- SUBARU
- NISSAN
- AUDI
- MERCEDES
- BMW
- TMC RP 329 Type A/302A-1
- JOHN DEERE 8650-5,H-5
- MACK TRUCK 014GS17004
- FORD NEW HOLLAND 9-86
- FREIGHTLINER 48-22880
- WHITE (GMC VOLVO)
- CASE CORP. MS1710, JIC-501
- FORD ESE-M97B44-A & B
- FORD ESE-M97B18-C
- CATERPILLAR EC-1,ELC
- CHRYSLER MS-7170
- CUMMINS 90T8-4
- CUMMINS 3666132
- DETROIT DIESEL 7SE298
- NAVISTAR B1 (B6-008GO)
- Waukesha 4-19470

Freeze/Boil Protection

AntiFreeze	Freeze Protection	Boiling Point
50 %	- 34 °F	265 °F

Properties	Typical Specifications	ASTM Test Method
Specific Gravity	1.120	D-1122
Freezing Point, 50%V/V	-34°F/-36°C	D-1177
Boiling Point, 50% V/V	226°F/107°C	D-1120
pH, 50% V/V	8.0 – 9.5	D-1287
Color	Green	-
Water mass %	<5	D-1123
Cavitation-erosion rating	>8	D-2809
Corrosion of Aluminum	<0.1 mg/cm ² /wk	D-4340



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Physical Properties

Antifreeze Glycols	mass %	95.0 min
Corrosion Inhibitors	mass %	2.1
Water	mass %	2.9
Flash Point	° F	250
Density @ 60 ° F	lbs/gal	9.3 – 9.4
Silicon	ppm	< 1

Characteristics	Specifications	Company Typical	ASTM Method
Chloride	25 ppm, max.	<25	D-3306
Nitrite	2400 ppm, min.	2890	D-5827
Specific Gravity	1.115-1.125	1.120	D-1122
Freezing Point, 50%V/V	-34°F/-36°C, max.	-34°F/-36°C	D-1177
Boiling Point, undiluted	325°F/162°C, min.	330°F/164°C	D-1120
Boiling Point, 50% V/V	226°F/107°C, min.	226°F/107°C	D-1120
Effect on Engine Finish	no effect	no effect	D-1882
Ash content, mass %	5 max.	2.5-2.7	D-1119
pH, 50% V/V	8.0-10.0	8.0-9.5	D-1287
Reserve Alkalinity*	N/A	2.0-5.0	D-1121
Water mass %	5 max.	< 5	-1123
Color	distinctive	varies with dye	-
Effect on nonmetals	no adverse effect	no adverse effect	-
Cavitation-erosion rating	8 min.	> 8	D-2809
Corrosion of Aluminum	<1 mg/cm2/wk	<0.1 mg/cm2/wk	D-4340

* 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

Glassware Corrosion Test		Specification	Actual
(ASTM D-1384)	Copper	10	0.3
	Solder	30	-0.9
	Brass	10	0.3
	Steel	10	0.5
	Cast Iron	10	0.5
	Aluminum	30	-7.2
	Weight Loss (mg/specimen)		
Corrosion of Aluminum		Specification	Actual
(ASTM D-4340)		<1 mg/cm2/wk	<0.1 mg/cm2/wk

