VALVOLINE™ MULTI-VEHICLE ANTIFREEZE COOLANT

Valvoline Multi-Vehicle Antifreeze Coolant is designed for unsurpassed freeze protection, enhanced corrosion protection, and excellent anti-boil performance. **Multi-Vehicle AFC** is an ethylene glycol-based formulation which can be used in all makes and models of vehicles. It is formulated with Alugard Plus® 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, **Multi-Vehicle AFC** protects modern engines from winter freezing and summer boil over. The chart below 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. **Multi-Vehicle AFC** with Alugard Plus® 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.

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

Valvoline has conducted in-house testing to support **Multi-Vehicle AFC** 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 **Multi-Vehicle AFC**. Valvoline stands behind all its products, including **Multi-Vehicle AFC**. The universal use of **Multi-Vehicle AFC** in automotive applications is recommended and supported by Valvoline. Many consumers have chosen to take advantage of this level of performance in newer applications.

Call 1-800-TEAM-VAL with questions.

Valvoline Multi-Vehicle Antifreeze Coolant is formulated to meet or exceed the following antifreeze specifications:

- ASTM D3306
- ASTM D4985
- CHRYSLER MS 7170
- CUMMINS 90T8-4
- DETROIT DIESEL 7SE298
- FEDERAL SPEC A-A-870A
- FORD ESE-M97B44-A
- GM 1825M
- GM 1899M
- SAE J1034
- SAE J1941
- SAE J814C
- TMC OF ATA RP-302B

Valvoline 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.

Multi-Vehicle 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.

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

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
Water used for dilution should contain less than 100 PPM Cl and SO4. It should also be 0-20 ° dH or treated to conform to these limits

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.	75 ml	D1881
	5 sec. Break, max.	2 sec.	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	
Solder	30	2	D1384
Brass	10	1	
Steel	10	0	
Cast iron	10	2	
Aluminum	30	0	
Simulated Service Test			
Copper	20	2	
Solder	60	3	D2570
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

This information only applies to products manufactured in the following location(s): USA, Canada, and Mexico.

Part #	*Product*
719009	Multi-Vehicle AFC 6/1 GAL
719008	Multi-Vehicle AFC 55 GAL Drum
733837	Multi-Vehicle AFC 275 GAL Tote
719010	Multi-Vehicle Bulk
719005	Multi-Vehicle Ready-To-Use AFC 6/1 GAL
719004	Multi-Vehicle Ready-To-Use 55 GAL Drum
742932	Multi-Vehicle Ready-To-Use 275 GAL Tote
719006	Multi-Vehicle Ready-To-Use AFC Bulk

Effective Date:
11/16/20

Author's Initials:
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