



VALVOLINE™ ZEREX™ G40® ANTIFREEZE COOLANT

Valvoline ZEREX G40 Antifreeze Coolant is premium automotive engine coolant developed by BASF SE and Valvoline. The patent-pending hybrid carboxylate formulation has an extended service life. It incorporates state-of-the-art organic acid technology in an ethylene glycol base for protection of all cooling system metals including aluminum.

Valvoline ZEREX G40 contains no phosphates, imidazole, borates, nitrates, amines or nitrites. **ZEREX G40** is approved by numerous manufacturers and is approved for the latest VW group requirements for service and factory fill. It is dyed pink to distinguish its unique chemistry from traditional green and yellow coolants.

Valvoline ZEREX G40 meets the ASTM D3306, D4985, and D6210 specifications. When diluted 50% with water, it protects modern engine components from winter freezing and summer boiling. The chart below provides detailed mixing information. **ZEREX G40** is storage stable for up to five years as both a concentrate or diluted with water. It contains a high quality defoamer and will not harm gaskets, hoses, plastics or original vehicle paint.

Visit www.valvoline.com or call 1-800-TEAM-VAL for more information.

Valvoline ZEREX G40 is an approved formula for the following specifications:

Audi TL 774 G	MB Approval 325.6
Bentley TL 774 G	Mercedes Truck
Bugatti TL 774 G	Mercedes-Benz MB-Approval 325.5
Cummins CES 14603	MTU MTL 5048
DCC	Porsche (from 2010)
Detroit Diesel DFS93K217ELC	SCANIA
DEUTZ DQC CC-14 Approved	Seat TL 774 G
Irizar (from 2016)	Škoda TL 774 G
Lamborghini TL 774 G	Smart MB-Approval 326.0
Liebherr Minimum LH-01-COL3A	VW TL 774 G
MAN MAN 324 Type Si-OAT	

Valvoline ZEREX G40 is formulated to meet or exceed the following antifreeze specifications and/or is recommended:

ASTM D3306	SAE J1034
ASTM D4985	SAE J1941
ASTM D6210	SAE J814
Federal Specification A-A-870A	VW TL-774J
Navistar MPAPS B1 IIIA	

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.

Valvoline ZEREX G40 Antifreeze/Coolant Boil/Freeze Protection		
% Antifreeze	Freezing Point, °F/°C	Boiling Point**, °F/°C
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 %	93.0
Corrosion Inhibitors	mass %	4
Water	mass %	3
Flash Point	°F/°C	250/121
Weight per gallon @ 60°F/16°C	lbs / KG	9.383 / 4.256
Silicates	PPM	180-230
Phosphates	PPM	10 max

Aluminum Water Pump Tests		
ASTM D2809 Pump Cavitation (Extended Test)		
Test Period	Results	Specification
100 hours	9	8

ASTM cavitation corrosion rating: 10 - perfect 1 - perforated

Characteristics	Specifications	Typicals	ASTM Method
Chloride	25 PPM, max.	<10	D3634
Silicon PPM as Si	180-230	200	-
Specific gravity, 60/60° F	1/1220 – 1.1350	1.1280	D1122
Freezing point, 50% V/V	-34°F/-36°C	-34°F/-36°C	D1177
Boiling point, undiluted	325°F/162°C	330°F/164°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	<4	D1119
pH, 50% V/V	8-9	8.5	D1287
Reserve alkalinity*	8.0-11	9	D1121
Water mass %	5 max.	3.0	D1123
Color	Distinctive	Pink / Violet	-
Effect on nonmetals	No Adverse Effect	No Adverse Effect	-
Storage stability	-	5 years	-
Foaming	150 ml Vol., max.	40 ml	D1881
	5 sec. Break, max.	1 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 number.

Typical ASTM Corrosion Test Results			
	Weight Loss Mg/Specimen		
Glassware Corrosion Test	Spec.	Actual	ASTM Method
Copper	10	1	D1384
Solder	30	1	
Brass	10	1	
Steel	10	0	
Cast iron	10	0	
Aluminum	30	-1	
Simulated Service Test			
Copper	20	2	D2570
Solder	60	24	
Brass	20	1	
Steel	20	1	
Cast iron	20	1	
Aluminum	60	0	
Hot Surface Corrosion	mg/cm ² /wk		
Specimen weight loss	1.0	0.18	D4340
John Deere Pitting Test	<200	passed	D7583
Ford Pitting Test mV min	-400	-265	FLTM BL5-1

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

<u>Material/Product</u>	
<i>Part #</i>	<i>Product</i>
861526	ZEREX G-40 6/1 GAL
691572	ZEREX G-40 55 GAL DRUM
796335	ZEREX G-40 275 GAL TOTE
861399	ZEREX G-40 READY TO USE 6/1 GAL
861744	ZEREX G-40 RTU 275 GAL TOTE

Effective Date:
6/6/18

Author's Initials:
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