



Valvoline™ OEM Advanced 05 Concentrate Coolant (Previously Zerex G-05 Concentrate)

Valvoline™ OEM Advanced 05 Concentrate Coolant is a long life, fully formulated, ethylene glycol-based fluid suitable for passenger cars, light trucks and heavy-duty vehicles. The formulation is designed for both petrol and diesel engines. Its lower-silicate, reduced pH, phosphate free European technology protects all cooling system metals, including aluminum, from corrosion. Valvoline™ OEM Advanced 05 Concentrate Coolant is a nitrite containing coolant designed to protect diesel engine cylinder liners from cavitation. It contains deposit control additives for protection from hard water deposits and scale. The ASTM and other test data shown on this sheet reflect the high-performance corrosion inhibitor package.

When diluted 50% with water, Valvoline™ OEM Advanced 05 Concentrate Coolant protects modern engine components from winter freezing and summer boil over. A 50% concentration is suggested for optimum corrosion protection. Valvoline™ OEM Advanced 05 Concentrate Coolant is compatible with other premium brands of ethylene glycol-based coolant. However, long life characteristics may be diminished by mixing with light duty or conventional fully formulated coolants. Valvoline™ OEM Advanced 05 Concentrate Coolant contains a high quality defoamer system and will not harm hoses and plastics.

Valvoline™ OEM Advanced 05 Concentrate Coolant is *approved* formula for the following specifications:

- | | |
|--------------------|-----------------------------|
| Chrysler MS 9769 | John Deere JDM H24 |
| Cummins CES 14603 | Mercedes Benz (before 2017) |
| Ford WSS-M97B51-A1 | MTU MTL 5048 |
| GE Wind Turbines | MAN List 3.3.7 |
| JCB STD00088 | MTU/DDC |

Valvoline™ OEM Advanced 05 Concentrate Coolant is formulated to meet or exceed the following specifications:

- | | |
|--------------------------------|-----------------------|
| ASTM D3306 | GM 1825M |
| ASTM D6210 | GM 1899M |
| Case New Holland | MACK |
| CAT EC-1 | Navistar MPAPS B1 III |
| Detroit Diesel 7SE298 | PACCAR |
| Federal Specification A-A-970A | Perkins Diesel |
| | TMC of ATA RP-329B |

*Check owners' manual before use

Application

Valvoline™ OEM Advanced 05 Concentrate Coolant is designed for use in passenger cars, light duty and commercial petrol and diesel engines.

Valvoline™ OEM Advanced 05 Concentrate requires the use of Supplemental Coolant Additive (SCA) as specified by OEM for continued long term protection of wet sleeve liners.

Mixture Ratio Guide

*Please consult owner's manual before use. Refer to vehicle cooling system requirements for correct mixture ratio.

Antifreeze Boil/Freeze Protection		
Antifreeze %	Freezing Point, °C	Boiling Point** °C
50	-36	128

Note: Complete drain and flush of cooling system is always recommended. Mixing with light duty or conventional fully formulated coolants may diminish optimum performance and cooling system protection.

PRODUCT INFORMATION



Features and Benefits

- Protection for up to 5 years or 240,000 kms (whichever comes first) for Passenger vehicles.
- Protection for up to 3 years or 500,000 kms (whichever comes first) for Heavy Duty vehicles.
- Utilises hybrid organic acid technology to minimize inhibitor depletion.
- Low silicate, pH and phosphate free formula.
- Provides maximum protection against liner pitting and pitting.
- Help prevents rust and corrosion.
- Help prevent hot weather boil-over and cold weather freeze protection.
- Protects mixed cooling system metals including aluminium.

Keeping the world moving since 1866™

Serving more than 100 countries around the globe, Valvoline is a leading marketer, distributor and producer of quality branded automotive and industrial products and services. Products include automotive lubricants including MaxLife™, the first motor oil specifically formulated for higher-mileage vehicles; transmission fluids; gear oils; hydraulic lubricants; automotive chemicals; specialty products; greases, and cooling system products.

For more information on Valvoline products, programs and services please visit www.valvoline.com.au or contact the Technical Hotline on 1800 804 658 for product recommendations.

Typical Properties and Characteristics

Typical property characteristics are based on current production. Whilst future production will conform to Valvoline™ specifications, variations in these characteristics may occur.

Valvoline™ OEM Advanced 05 Coolant Concentrate		
Physical Properties	Unit	Typical
Antifreeze Glycol	Mass %	94.0
Corrosion Inhibitor	Mass %	5.4
Water	Mass %	2
Flash Point	°C	121
Weight per gallon @ 16 °C	Lbs./KG	9.4642/4.267
Silicate	PPM	252-308
Phosphates	PPM	30 max.

Valvoline™ OEM Advanced 05 Coolant Concentrate*			
Characteristic	Specifications	Typical	ASTM Method
Chloride	25 PPM, max.	<25	D3634
Silicon	250 PPM, max.	<240	-
Specific gravity, Con 15.6 ° C	1.110 - 1.145	1.1375	D1122
Freezing point, 50% V/V	-36 °C	-36 °C	D1177
Boiling point, undiluted	162 °C	164 °C	D1120
Boiling point, 50% V/V	107 °C	107 °C	D1120
Effect on engine or vehicle finish	No Effect	No Effect	-
Ash content, mass %	5 max.	<2	D1119
pH, 50% V/V	7.5 - 11.0	8.0	D1287
Reserve alkalinity*	Report	17.9	D1121
Water mass %	5 max.	1.93	D1123
Color	Distinctive	Green	-
Effect on nonmetals	No adverse effect	No adverse effect	-
Storage stability	-	3 years	-
Foaming	150 ml vol., max.	35 ml	D1881
	5 sec. break, max.	2.1 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 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

Valvoline™ OEM Advanced 05 Coolant Concentrate Aluminium 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

PRODUCT INFORMATION



Typical ASTM Corrosion Test Results			
	Weight Loss Mg/Specimen		
Glassware Corrosion Test	Spec.	Actual	ASTM Method
Copper	10	0	D1384
Solder	30	0	
Brass	10	1	
Steel	10	-3	
Cast Iron	10	1	
Aluminium	30	2	
Simulated Service Test			
Copper	20	2	D2570
Solder	60	2	
Brass	20	1	
Steel	20	-1	
Cast Iron	20	-1	
Aluminium	60	-2	
Hot Surface Corrosion		mg/cm ² /wk	
Specimen weight loss	1.0	0.15	D4340

This information only applies to products manufactured in the following location(s): Australia

Part Number	Pack Size
0953.01	1L
0953.05	5L
0953.20	20L
0953.52	60L
0953.28	208L

Health and Safety

This product is not likely to present any significant health or safety hazards when used correctly in the right application. Safety Data Sheet (SDS) is available on request via your local sales office or 1800 804 658 or through our website www.valvoline.com.au

Protect the Environment

Take used oil to an authorized collection point. Do not discharge into drains, soil or water.

Storage

Storage We recommend to store all packages under cover. In case outside storage is unavoidable, drums should be laid horizontally to avoid the possible ingress of water and damage to drum markings. Products should never be stored above 60 °C, exposed to hot sun or freezing conditions.

Author:

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