

**PRODUCT
SPECIFICATION**



**RAD Global 50/50 Life Antifreeze
TYPE RA 291**

Number of revisions: 1

Date of last revision: Feb, 2008

Technical Information:

Physical state : Liquid

Appearance: Viscous, sheer

Application: Universal Long life antifreeze

This product is a carboxylate-based inhibitor system and is "precharged" silicate-free, nitrite-free formula creating a high quality extended life ethylene glycol antifreeze/coolant for all engine metals, including aluminum and ferrous alloys. Its special blend of long-lasting inhibitors is designed to protect all engine components, for five years, or 250000 km, when is used as directed.

Global long life coolant /antifreeze exceeds the requirements of ASTM D3306/4985,D6210, TMC RP329, Chrysler MS9769, GM1825M& 6277M, Ford M97B51-A1,JIS K2234 (Japan), JASO M325 (Japan), FVV HEFT R443 (Germany), Mercedes Benz DBL 770, BS6580 (British Standard), ANFOR 15-601, Caterpillar EC-1 (section 2.3-4.5 inc.), Detroit diesel 7SE298, International, SAE J1034 and J1942, ASTM D4340 hot surface aluminum protection and Cummins heavy duty low silicate requirements. Compatible with Dex-cool®, Havoline® XLC extended life and other OAT and NOAT coolants.

**Hall-Chem Code RA-291
WHMIS CLASSIFICATION:
D2A, D2B
PRIMARY CLASS : N/R**



Physicochemical Specifications:

Indices	Test Method	Limit Values	Typical Values
Specific Gravity @60°F	D-1122	1.058-1.072	1.065
Freezing Point :	D-1177	-34°F (-37°C) Max	34°F (-37°C)
Boiling Point A F° (C°)	D-1120	226°F (108°C) Min	226°F (108°C)
Effect: Automotive Finish	D-1882	No Effect	No Effect
Ash Content, Mass %	D-1119	5% Max	0.8%
pH	D-1287	8.5 – 10.5	9.5
Water, Mass %/	D-1123	1% Max	0.5%
Reserve Alkalinity, ml	D-1121	Report B	1.5-4.5

Corrosion in Glassware Weight Loss, mg/specimen	D-1384		
Copper		10 Max	0
Solder		30 Max	2
Brass		10 Max	1
Steel		10 Max	0
Cast Iron		10 Max	0
Aluminum		30 Max	0
Simulated Service Weight Loss, mg/specimen	D-2570		
Copper		20 Max	2
Solder		60 Max	15
Brass		20 Max	5
Steel		20 Max	1
Cast Iron		20 Max	1
Aluminum		60 Max	0
Corrosion of Cast Aluminum Alloys at Heat Rejecting Surfaces mg/cm ² /week	D-4340C	1.0 Max	0.175
Foaming Volume, ml Break Time, seconds	D-1881	150Max 5 Max	50ml 1.2 sec.
Pitting, Cavitation or Erosion of the Water Pump ^C	D-2809	8 Max	<8
^A Some precipitate may be observed at the end of the test. This should not be cause for rejection.			
^B Agreed value between supplier and customer.			
^C This test is not required by ASTM D-4985; however, ASTM D-3306 requires it.			
Packing:			
*Plastic Containers 1100 l and Metal Drums - 205 l * Plastic Containers of 4 l, 3.7 l and 18.9 L			
These data are based on our current knowledge, experience and technical equipment. They do not relieve customers of carrying out their own tests and experiments, due to the great diversity of possible effects in processing and application of our products. They do not imply any legally binding assurances of certain properties and applications. The recipients of our products ought to abide by the existing legislation and regulations as well as possible reserved rights			
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