

**PRODUCT
SPECIFICATION**



**Antifreeze Rad Gold Global
SD159**

Number of revisions: 1

Date of last revision: January 16, 2009

Technical Information:

Physical state : Liquid

Appearance: Viscous, No Color or Yellow color

Application: Long life Antifreeze

Rad Gold is an advanced hybrid antifreeze inhibitor package is fully compatible with the new Ford and Chrysler antifreezes providing protection for 5 years/250000 km and may be used in diesel engines without a pre-charge of supplemental coolant additive. The product is also compatible with older conventional and new long-life coolants making it one of the most universally compatible engine coolants in the market.

Rad Gold antifreeze meets and exceeds the following performance specifications: 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 SD-159
WHMIS CLASSIFICATION:
D2A, D2B
PRIMARY CLASS : N/R
SUBSIDIARY CLASS :
PACKING GROUP :**



Typical properties	Test Method	Limit Values	Typical Values
Specific Gravity @60°F	D-1122	1.110 – 1.131	1.112
Freezing Point 50 Vol % in Distilled Water: F° (C°)	D-1177	-34°F (-37°C) Max or Lower	-34°F (-37°C)
Boiling Point A F° (C°)	D-1120	Min 325°F (163°C)	325°F (164°C)
Effect: Automotive Finish	D-1882	No Effect	No Effect
Ash Content, Mass %	D-1119	5% Max	2.53%
pH: 50 Vol % in Water	D-1287	7.5 – 11.0	8.18
Chloride, PPM	By IC	25.0 Max	20.0

Water, Mass %/	D-1123	5 Max	2
Reserve Alkalinity, ml	D-1121	ReportB	24.6
Corrosion in Glassware Weght Loss, mg/specimen	D-1384		
Copper/ Cuivre		10 Max	3
Solder/ Brasure		30 Max	7
Brass/ Laiton		10 Max	1
Steel/ Acier		10 Max	0
Cast Iron/ Fonte		10 Max	2
Aluminum		30 Max	0
Simulated Service Weight Loss, mg/specimen Utilisation simulée	D-2570		
Copper/ Cuivre		20 Max	2
Solder/ Brasure		60 Max	9
Brass/ Laiton		20 Max	2
Steel/ Acier		20 Max	0
Cast Iron/ Fonte		20 Max	5
Aluminum		60 Max	3
Corrosion of Cast Aluminum Alloys at Heat Rejecting Surfaces mg/cm2/week	D-4340C	1.0 Max	0.3
Foaming Volume, ml Break Time, seconds Volume de mousse	D-1881	150Max 5 Max	80ml 2.3 sec
Cavitation Erosion Rating: Pitting, Cavitation or Erosion of the Water Pump	D-2809	8 Min	8
<p>^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.</p>			
Packing:			
*Plastic Containers 1100 l and Metal Drums - 205 l * Plastic Containers of 18.9 L 4 L, and 1 L			
<p>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</p>			
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