

**UNIVERSAL ENGINE COOLANT****PERFORMANCE TESTING**

ASTM\* D-1384 GLASSWARE CORROSION TEST - weight loss in mgs.

<b>METAL</b>	<b>XSS-84114.00</b>	<b>ASTM D-3306 (max.)</b>	<b>ASTM D-4985 (max.)</b>
Copper	0.9	10	10
Solder	3.3	30	30
Brass	1.3	10	10
Steel	0.3	10	10
Cast Iron	2.9	10	10
Aluminum	+1.8	30	30

ASTM\* D-2570 SIMULATED-SERVICE CORROSION TEST - weight loss in mgs.

<b>METAL</b>	<b>XSS-84114.00</b>	<b>ASTM D-3306 (max.)</b>	<b>ASTM D-4985 (max.)</b>
Copper	5	20	20
Solder	3	60	60
Brass	6	20	20
Steel	1	20	20
Cast Iron	2	20	20
Aluminum	0	60	60

**ASTM D-4340 HEAT-EJECTING ALUMINUM CORROSION TEST**

<b>PRODUCT</b>	<b>CORROSION RATE (mgs/cm<sup>2</sup> - week)</b>
XSS-84114.00	0.18

(ASTM D-3306 specifies rate 1.0 mgs/cm<sup>2</sup>-week maximum (No specified requirement by ASTM D-4985))

ASTM D-2809 ALUMINUM PUMP CAVITATION CORROSION TEST

	<b>XSS-84114.00</b>	<b>ASTM D-3306 (min.)</b>	<b>ASTM D-4985 (min.)</b>
<b>RATING</b>	8+	8	8
Shelf Life Stability	2 years		

**PHYSICAL & CHEMICAL PROPERTIES**

<b>TEST</b>	<b>XSS-84114.00</b>	<b>AST METHOD</b>
pH		ASTM D-1287
50% sol'n	11.0 Max.	
33 1/2% sol'n	10.0 Min.	
Reserve Alkalinity (ml)	10	ASTM D-1121
Specific Gravity 15.9C/15.9C	1.110-1.145	ASTM D-1122
Equilibrium Boiling	150C Min.	ASTM D-1120
Freeze Point (50% solution)	-37C	ASTM D-1177
Foaming		ASTM D-1881
Foam Height (ml)	50 Max.	
Break Time (sec.)	5 Max.	
Flash Point	116C Min.	ASTM D-92
Fire Point	120C Min.	
Ash Content (wt. %)	2 Max.	ASTM D-1119
Odour	Characteristic	
Colour	Green	
Silicon	250 ppm Max.	
Composition (% by weight)		
Total Glycols	24% Min.	
Inhibitors and Dye	2.0% Min.	
Total Apparent Water	3.5 Max.	
Chloride (ppm)	25 Max	

\*REFERENCE: America Society For Testing and Materials

SURE-CRAFT Universal Engine Coolant is specifically formulated to meet the coolant performance requirements of Automotive/Light duty vehicles as well as those of Heavy Duty Diesel engines.

SURE-CRAFT Universal Engine Coolant provides corrosion protection for all cooling system metals, in all engine applications, including heat rejecting aluminum components such as cylinder heads and blocks common to modern automobiles. In addition to

this protection, SURE-CRAFT Universal Engine Coolant is also low in silicon content for wet sleeve diesel application. This coolant is suitable for the addition of Supplemental Coolant Additives (SCA) for HD applications.

SURE-CRAFT Universal Engine Coolant meets or exceeds the following coolant specifications.

ASTM	D-3306, D-4985
CGSB	CAN2-3.890.M83
GENERAL MOTORS	GM1899M

Our Oil lab offers a high tech analysis for used coolant or for your source water. Avoid coolant related problems by taking advantage of this economical service twice each year or every 1,000 hours of operation.

SURE-CRAFT Aluminum Compatible Engine Coolant is manufactured for Finning by Dow Chemical.

The performance and physical property data described for this product are presented in good faith and believed to be reliable, however, they should be considered as typical results and not as sales specifications.