

# TESTING SHOWS AMSOIL DOMINATOR® COOLANT BOOST OUTPERFORMS RED LINE WATER WETTER®

Competitive testing comparing AMSOIL Dominator® Coolant Boost and Red Line Water Wetter® was conducted in an independent laboratory. The ASTM corrosion tests featured in this study are designed to simulate the most grueling conditions cooling systems face, and are the actual test standards the automotive industry relies upon for the approval of engine coolant products. Test results show Dominator Coolant Boost provides enhanced temperature reduction and corrosion protection properties compared to Red Line Water Wetter.



## Temperature Reduction Dynamometer Test

To test temperature reduction capabilities, controlled engine dynamometer (dyno) tests were performed on a 350 cubic inch Chevy engine with an aluminum block and cylinder heads. In each phase of testing, the engine was operated at 4,500 rpm until coolant temperature stabilized. As benchmarks for the test, straight water coolant stabilized at 220°F and a 50/50 antifreeze/water mixture stabilized at 228°F.

### TEMPERATURE REDUCTION

	Dominator Coolant Boost	Red Line Water Wetter
Mixed with 50/50 Antifreeze/Water	6°F reduction	3°F reduction
Mixed with Straight Water	19°F reduction	12°F reduction

## Cast Aluminum Alloys Corrosion Test

The Cast Aluminum Alloys Corrosion Test (ASTM D-4340) measures corrosion protection properties in modern automobile and high-performance race engines with aluminum cylinder heads. A cast aluminum puck was heated to 275°F at 28 PSI and exposed to the test coolant mixture for one week. Weight loss of less than 1.0 mg is required to pass the test.

### WEIGHT LOSS

Allowable	Dominator Coolant Boost *	Red Line Water Wetter*	Water Only
< 1.0 mg	0.14 mg	0.21 mg	3.97 mg

## Corrosion Test in Glassware

In the Corrosion Test in Glassware (ASTM D-1384), six metal coupons constructed of the most common metals in automotive cooling systems were totally immersed in aerated coolant mixtures for 336 hours at 190°F. Each test was performed three times to determine the average weight change for each metal. The ASTM sets the "allowable" weight loss maximums for each metal.

	Allowable	Dominator Coolant Boost*	Red Line Water Wetter*	Water Only
Copper weight loss	10 mg max	1 mg	1 mg	25 mg
Solder weight loss	30 mg max	1 mg	6 mg	62 mg
Brass weight loss	10 mg max	0 mg	2 mg	23 mg
Steel weight loss	10 mg max	1 mg	1 mg	18 mg
Cast Iron weight loss	10 mg max	0 mg	0 mg	29 mg
Cast Aluminum weight loss	30 mg max	0 mg	16 mg	91 mg

## Simulated Service Corrosion Test

In the Simulated Service Corrosion Test (ASTM D-2570), six metal coupons constructed of the most common metals in automotive cooling systems were exposed to ASTM corrosive water designed to simulate hard and corrosive water in degraded coolant for 1,064 hours at 190°F. Coolant was maintained at a temperature and flow rate equivalent to the operating conditions seen in most passenger vehicles. Corrosive weight loss suffered during the test determines the additive's corrosion protection properties. The ASTM sets the "allowable" weight loss maximums for each metal.

	Allowable	Dominator Coolant Boost*	Red Line Water Wetter*	Water Only
Copper weight loss	20 mg max	7 mg	6 mg	66 mg
Solder weight loss	60 mg max	0 mg	25 mg	120 mg
Brass weight loss	20 mg max	3 mg	5 mg	59 mg
Steel weight loss	20 mg max	0 mg	4 mg	54 mg
Cast Iron weight loss	20 mg max	0 mg	2 mg	117 mg
Cast Aluminum weight loss	60 mg max	0 mg	34 mg	89 mg

\* mixed with straight water