



## Dominator® Coolant Boost

### Provides Effective Heat Transfer and Enhanced Corrosion Protection

Racers demand lower engine operating temperatures in order to achieve maximum efficiency and horsepower on the track, while the straight water coolant used by many racers opens engines up to damaging radiator and water pump corrosion. AMSOIL Dominator® Coolant Boost (RDCB) provides racers and motorists with significantly lower engine operating temperatures, quicker engine warm-up times and advanced corrosion protection.

Dominator Coolant Boost is formulated with proprietary tiered surfactant technology, providing quick and effective heat transfer inside radiators and cylinder heads, which results in reduced operating temperatures, more efficient operation, increased horsepower and significantly reduced engine warm-up times in cold weather. Coolant Boost also contains a robust mixture of corrosion inhibitors that protect the radiator, heater core, water pump, cylinder heads, engine block and intake manifold from the damaging effects of corrosion.



### Testing

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 over 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 (in degrees Fahrenheit)

	DOMINATOR COOLANT BOOST	RED LINE WATER WETTER
Mixed with 50/50 Antifreeze/Water . . . . .	6°F reduction . . . . .	3°F reduction . . . . .
Mixed with Straight Water Coolant . . . . .	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.

#### ASTM D-4340

	DOMINATOR COOLANT BOOST (in straight water)	RED LINE WATER WETTER (in straight water)	WATER ONLY
Weight loss in mg (1.00 max) . . . . .	0.14 . . . . .	0.21 . . . . .	3.97 . . . . .

## 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.

### ASTM D-1384

	ALLOWABLE	DOMINATOR COOLANT BOOST (in straight water)	RED LINE WATER WETTER (in straight water)	WATER ONLY
Copper weight loss (mg)	10 max	1	1	25
Solder weight loss (mg)	30 max	1	6	62
Brass weight loss (mg)	10 max	0	2	23
Steel weight loss (mg)	10 max	1	1	18
Cast Iron weight loss (mg)	10 max	0	0	29
Cast Aluminum weight loss (mg)	30 max	0	16	91

## 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.

### ASTM D-2570

	ALLOWABLE	DOMINATOR COOLANT BOOST (in straight water)	RED LINE WATER WETTER (in straight water)	WATER ONLY
Copper weight loss (mg)	20 max	7	6	66
Solder weight loss (mg)	60 max	0	25	120
Brass weight loss (mg)	20 max	3	5	59
Steel weight loss (mg)	20 max	0	4	54
Cast Iron weight loss (mg)	20 max	0	2	117
Cast Aluminum weight loss (mg)	60 max	0	34	89

## Recommendations

Dominator® Coolant Boost is recommended with both racing applications using straight water coolant and automotive applications using 50/50 coolant/water mixtures.

**Directions:** With engine off and cool, make sure cooling system is filled with selected coolant. Shake bottle and pour calculated amount of Coolant Boost into radiator. Start engine, turn heat on high and run for 15 minutes. Do NOT use distilled water unless mixed with 50% antifreeze.

**Dosage:** For straight water applications, add 2 fl. oz. of Coolant Boost per quart of tap or softened water. For 50/50 coolant/water applications, add 1 fl. oz. of Coolant Boost per quart of 50/50 mix.

**Frequency:** In applications using Coolant Boost with straight water, drain and re-fill the coolant system and add Coolant

Boost once per year or when indicated by color change. A distinctive pH color change indicates when the pH has fallen to a point where corrosion can set in. When the Coolant Boost/water mixture changes from pink to clear, another dosage of Coolant Boost should be added. Monitoring the pH level will ensure all vital areas of the cooling system are protected against corrosion.

In applications using Coolant Boost with 50/50 coolant/water mixtures, add Coolant Boost once per year or every 30,000 miles, whichever comes first. Follow coolant manufacturer recommendations for coolant change intervals.



Contact your AMSOIL Dealer for more information on AMSOIL products or to place an order. You may also order direct by calling AMSOIL INC. at 1-800-956-5695 and providing the referral number listed here. ▼

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