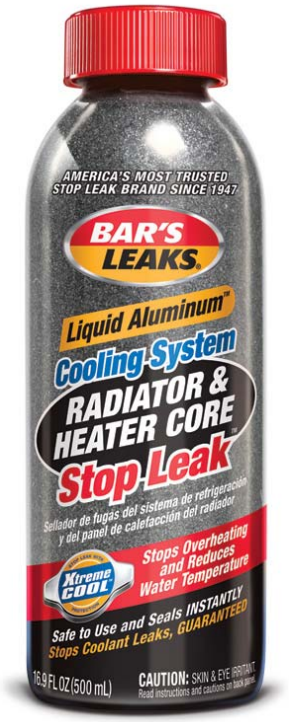
ISO 9001 CERTIFIED	BAR'S LEAKS TECHNICAL BULLETIN	
	Tech Bulletin #: TB-1186-5	Page 1 of 2
	Date 1st Issued: February 12, 2009	Date Revised: September 29, 2014
	Bar's Leaks® Liquid Aluminum™ Cooling System Stop Leak	Part #: 1186

BAR'S LEAKS® LIQUID ALUMINUM™ COOLING SYSTEM / RADIATOR & HEATER CORE STOP LEAK WITH XTREME COOL™



Bar's Leaks® Liquid Aluminum™ Cooling System / Radiator & Heater Core Stop Leak is the best radiator stop leak money can buy. Scientifically formulated to permanently seal coolant leaks that are the cause of most overheating problems. Liquid Aluminum™ is part of the next generation stop leak line which not only seal leaks, but also conditions the system. Contains Xtreme Cool™ which stops overheating and reduces water temperature. It is guaranteed to safely and easily seal leaks in plastic, aluminum and metal (copper / steel) radiators, heater cores, gaskets and freeze plugs. Works in cars, trucks, vans, SUV's and RV's. Use with all types of coolant including yellow, orange, pink, red, blue and green silicate based & non-silicate based OAT / HOAT antifreeze and/or water. For most vehicles leaks stop instantly.

For severe leaks, like a blown head gasket, it is recommended to use **Bar's Leaks Head Gasket Fix** or **Head Gasket & Cooling Sealant.**

NOTE: Cooling systems that are dirty or partially clogged should be flushed before usage. Protect bottle from freezing.

INSTRUCTIONS:

1. Allow engine to cool. Make sure engine is cool enough so radiator cap can be safely removed.
2. Shake well. Pour ***Liquid Aluminum***™ directly into radiator. One bottle treats systems up to 4 gallons. Use ½ bottle for four cylinder engines.
   TIP: If direct access to radiator is not available, install in overflow tank.
3. Fill "top off" radiator and overflow / reservoir tank to proper level and reinstall cap.
4. Turn heater on hot and fan on high.
5. Drive/idle engine for 10 to 20 minutes.
6. Leave ***BAR'S LEAKS® Liquid Aluminum***™ in the cooling system for continued protection. If leak continues, second application may be required or mechanical attention is needed.

Part Number:	1186
UPC Item:	0 46087 01186 7
UPC Case:	1 00 46087 01186 4
Bottle Size:	16.9 FL. OZ. (500 mL)
Bottle Dimensions:	2.6 x 2.6 x 7.4
Bottle Cube:	50
Case Pack:	6 bottles per case
Case Size:	8.1 x 5.5 x 8.0
Case Cube:	356
Case Weight:	7.6 pounds
Pallet:	TI 39 HI 5 Total 195
Pallet Height:	44 inches

DOSAGE

Use 1 (one) bottle for 6, 8 and 10 cylinder engines. Add ½ bottle for 4 cylinder engines. For larger systems, use 1 bottle for every 3 gallons of cooling system capacity.

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THE BEST RADIATOR STOP LEAK MONEY CAN BUY

STOP LEAK
Liquid Aluminum™ safely seals leaks in plastic, aluminum and metal radiators, heater cores, gaskets and freeze plugs. One of the few products to meet ASTM D6107 requirements for Stop Leak Additives used in Engine Coolants.

XTREME COOL™
Xtreme Cool™ reduces the surface tension of coolant increasing the wetting ability. This improves heat transfer reducing coolant temperature helping to prevent overheating and leaks.

ASTM D6107 LABORATORY TEST
Standard Specification for Stop-Leak Additive for Engine Coolants Used in Light Duty Service

Part 1: ASTM D1881 TEST
Standard Test Method for Foaming Tendencies of Engine Coolants

RUN # 1	1	2	3	Average
Foam Volume (mls)	75	80	75	75
Break Time (sec)	1.8	1.8	1.8	1.8

RUN # 2	1	2	3	Average
Foam Volume (mls)	85	85	80	85
Break Time (sec)	1.8	1.8	1.8	1.8

Part 2: ASTM D3147 TEST
Standard Test Method for Testing Stop-Leak Additives for Engine Coolants.

This test method covers screening procedures for the preliminary evaluation of leak-stopping materials intended for use in engine cooling systems.

Sample Run	Gum		Particles		Screen	Final Round	Final Slot	Fluid Lost
	Before	After	Before	After				mL
1	No	No	No	No	0.030	0.025	0.010	540
2	Yes	No	No	No	0.030	0.025	0.010	600
Average	Yes	No	No	No	0.030	0.025	0.010	570

The results of this test show that a 0.025 round hole and a 0.010 wide slot can be successfully sealed with this product with a minimal fluid loss.