



ISO 9001 CERTIFIED

BAR'S LEAKS TECHNICAL BULLETIN

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Bar's Leaks[®] Liquid Copper[™] Block Seal
Intake & Radiator Stop Leak

Part #: 1109

LIQUID COPPER[™] BLOCK SEAL INTAKE & RADIATOR STOP LEAK

Bar's Leaks[®] Liquid Copper[™] Block Seal Intake & Radiator Stop Leak seals larger leaks regular stop leaks won't. One step formula permanently repairs larger leaks in radiators, intake manifolds & gaskets, heater cores, blocks, heads and freeze plugs. Use on cars, trucks, vans, SUV's and RV's. **One "1" Step Sealer contains an antifreeze compatible sodium silicate liquid glass formula, so no draining of the cooling system is required.** It will not harm the cooling system when used properly. Use with all types of 50-50 mix antifreeze including conventional green or blue (Silicate-based) and extended life red/orange or yellow (OAT /HOAT) coolant.

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

DIRECTIONS:

1. Allow engine to cool. Make sure engine is cool enough so radiator cap can be safely removed.
2. Shake well. Pour **LIQUID COPPER[™] BLOCK SEAL** directly into radiator. If using in a small cooling system, such as 4 cylinders with no air conditioning, install ½ of bottle.
TIP: If you do not have access to your radiator, remove top hose where it connects to the top of the radiator and install product in hose. Reattach hose and tighten clamp. If you have a pressurized overflow tank, you can install in tank.
3. Fill radiator and overflow tank to proper level and reinstall radiator cap.
4. Turn heater on hot and fan on high.
5. Start vehicle and idle engine for 10 to 15 minutes.
6. Turn vehicle off and allow engine to cool until safe to open cap.
7. Top off radiator and leave **BAR'S LEAKS[®] LIQUID COPPER[™]** in the cooling system for continued protection. Drive vehicle as normal.

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



Part Number:	1109
UPC Item:	0 46087 01109 6
UPC Case:	1 00 46087 01109 3
Bottle Size:	Net. Wt. 18 OZ. (510 g)
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:	8.0 pounds
Pallet:	TI 39 HI 5 Total 195
Pallet Height:	44 inches

DOSAGE:

Use – 1/2 (half) bottle in a small cooling system, such as 4 cylinders with no A/C. For other small systems use approximately 3 ounces per gallon of cooling capacity. Use 1 bottle for regular size systems, which are most 4, 6, 8 and 10 cylinder engines. In larger systems, use 1 bottle for every 6 gallons of cooling system capacity.

PERMANENTLY FIXES COOLING SYSTEM LEAKS

SEALING LIQUID

Liquid penetrates large and small leaks in plastic, aluminum and cast iron intakes, heads, blocks and radiators.

STOP LEAK FIBERS

Fiber additives lock together with liquid to increase strength and promote a permanent seal in gasket leaks.

ASTM D3147 LABORATORY 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.

Gum		Particles		Screen	Final Round	Final Slot	Fluid Lost
Before	After	Before	After				mL
Yes	No	No	No	0.030	0.025	0.005	230

The results of this test show that a 0.025 round hole and a 0.005 wide slot can be successfully sealed with this product. But reality because of the special sodium silicate formula, it can stop a larger leak than even the test shows in real world applications.

PURPOSE OF A COOLING SYSTEM

Your engine creates up to 5,000 degrees of heat within the combustion chamber. Enough heat to melt the entire engine in less than 30 minutes! Approximately 1/3 of gasoline's energy is converted into usable power to propel the vehicle, 1/3 of the energy is dissipated out through the exhaust system, and the remaining 1/3 is carried off by the cooling system.

HOW DOES A COOLING SYSTEM WORK?

Coolant, which is a mixture of water and ethylene glycol (Antifreeze), is pumped throughout the engines water jacket drawing heat from the head, pistons, combustion chambers, cylinder walls, valves, etc. The heated coolant travels from the water jacket through a radiator hose, to the radiator, where aided by a fan, its air cooled and returned via the other radiator hose to the engine. Gas is **SAVED** and engine life **INCREASED** when the cooling system quickly reaches and maintains a very narrow operational range regardless of outside temperature extremes or engine load demands. Upon engine start up, the temperature must rise quickly, and then remain balanced – not too hot and not too cold! It's important to understand how the condition of the coolant and the condition of the cooling system components can affect the operational economy and life of your engine!