

LEAK ARMOR SEALANT KITS

944KIT-LEAKARMOR

972KIT-LEAKARMOR



Leak Armor is a 2-in-1 system additive that will find and seal leaks in refrigeration systems. It also contains an eliminator to dry any moisture in the system, preventing waxing and acid formation.

Leak Armor is a light, low viscosity particle free liquid that is directly placed into the system as a mist - as it travels with the refrigerant and oil throughout the system, the sealant exits the leak point and reacts with moisture in the air - this forms a low tensile crystalline structure that creates a permanent seal. Leak Armor comes with a reusable hose.

Leak Armor Easy Shot and Easy Shot with UV dye eliminates moisture, finds and stops leaks, and prevents future leaks. They are fast and easy to install requiring no pump down or recovery. LeakArmor Easy Shot is compatible with all oils and refrigerants and ideal for all systems including microchannel, heat pump and geothermal. Kit includes hose and sealant for systems up to 12 tons. 2 oz. vacuum packed can.

Part code	Description	Capacity	UOM	Master Qty
944KIT-LEAKARMOR	Leak Armor for systems up to 12 tons (42Kw)	2oz / 59ml	Each	12
972KIT-LEAKARMOR	Leak Armor UV for systems up to 12 tons (42Kw)	2oz / 59ml	Each	12

APPLICATION

- Use 1 can for systems up to 12 tons / 42 kW. If required, allow system to run for 10-14 days before installing second can. Do not exceed ratio of 1 can per 1 gal / 3.8L of system oil when installing a second can.

WARNINGS

- Always wear safety glasses and protective gloves.
- Use in compliance with the Montreal Protocol and regional or federal laws for the handling of refrigerants.
- Do not exceed 300 psig/20.7 bar at any time during charging or installation.
- Maximum results are achieved on moisture/contaminant-free systems, losing no more than 15% of the entire refrigerant charge over a 4-week period.

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HVAC/R LEAK SEALANT KIT

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■ IMPORTANT

Failure to follow check points below may result in compressor breakdown.

1. Charge system for proper operating conditions.
2. Check temperature of operating compressor 1 inch/2.5 cm up from base. Readings above 150°F/66°C may indicate abnormal condition – repair as required.
3. Check discharge temperature measured 1-2 inches/2.5-5 cm downstream of the compressor on the discharge line. Readings above 225°F/107°C may indicate contamination – repair as required.
4. Measure temperature across the liquid line drier to determine if a new drier is required. Temperature differential should be no more than 2°F or 1°C.

■ INSTRUCTIONS

Install into a fully-charged system on low side only

cw = clock wise, ccw = counter clockwise

1. Turn off AC/R unit and allow enough time for refrigerant to equalize in system.
2. Be sure piercing pin is below black washer by turning valve handle (A) ccw. Then thread can tapper (B) to can (C) by turning cw. Be careful not to cross thread or over tighten.
3. Connect opposite end of hose (D) to low side service port. Purge air from hose with system's refrigerant by slightly backing can ccw from can tapper (B) – where regional and federal laws permit.
4. Turn piercing valve (A) cw to pierce can.
5. Turn valve handle ccw to charge can with system's refrigerant.
6. While inverted, turn system on – can will empty.
7. Once can is empty, remove hose and can. Allow system to run for 10 minutes.



If can does not empty after 5 minutes:

- Recharge can with system off or use refrigerant cylinder.
- Turn unit back on.

NOTE: If can still does not empty, it has been contaminated from system moisture and/or particulate. Clean system before another sealant application is attempted.

Recycle can. DO NOT REUSE HOSE.

Consult SDS for important handling and safety information.

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■ WHAT SIZE HOLE AND PRESSURES WILL LEAK ARMOR REPAIR?

For optimum success a system should not be leaking more than 15% of its total refrigerant charge over a 4 week period. Leak Armor has been specifically designed to seal micro pores, 300 micron (characterized as champagne leaks) and smaller, typical seasonal leaks. The repair by the sealant will withstand 800 psi, as well as, low pressure vacuum testing used in triple evacuation procedures. Note: Leak Armor cannot permanently seal cracks that are subjected to thermal expansion and contraction movement.

■ WHEN SHOULD LEAK ARMOR BE USED?

It should be used when conventional leak detection methods are unsuccessful and all attempts to find and fix a leak have been exhausted. Use in compliance with the Montreal Protocol & regional or federal laws for handling of refrigerant.

■ HOW DOES LEAK ARMOR WORK?

Leak Armor is a light or low viscosity particle free liquid, the sealant is injected as a mist directly into the refrigerant stream utilizing our patented 29,000th of an inch orifice. As it travels with the refrigerant and oil throughout the system, the sealant exits the leak point and reacts with moisture in the atmosphere it forms a low tensile crystalline structure creating a permanent seal.

■ WHAT IF THERE IS MOISTURE IN THE SYSTEM?

The addition of Dry R to all our Leak Armor formulas adds an extra level of protection beyond what normal sealants can offer. The active ingredient in Dry R reacts with water to eliminate 20 drops of moisture from the system. Higher levels of moisture can prematurely activate the sealant and cause formation at areas of moisture concentration such as driers, and metering devices, resulting in possible restriction and system failure. We recommend that technicians always adhere to ARI recommended levels of moisture for AC/R systems.

■ WILL LEAK ARMOR CLOG THE VALVE CORE AS I INJECT THE PRODUCT INTO THE SYSTEM?

No, when the sealant is injected into the system, it has already been combined with the refrigerant charge and the refrigerant acts as a solvent, cleaning the valve core as it passes through.

■ WILL THE SEALANT HARM THE COMPRESSOR OR ANY OTHER COMPONENTS IN THE SYSTEM?

No, the sealant is completely compatible with the electrical windings of the compressor motor. It will not interfere with compressor valves or form wax in cap tubes, orifices, or thermostatic expansion valves, and does not impede the lubricity of the system oil in any way.

■ IS LEAK ARMOR COMPATIBLE WITH ALL OILS AND REFRIGERANTS, INCLUDING 410A?

Yes, LEAK ARMOR is packaged in a vacuum and uses the system's refrigerant to charge the can and propel the sealant into the system. Use as per application guidelines below:

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■ WHAT HAPPENS TO LEAK ARMOR WHILE IT IS IN THE SYSTEM?

The chemical formulation remains in a stable state while it travels within the dry refrigerant/oil stream. Only when it exits at a leak point and makes contact with moisture in the air does it begin to form a permanent seal.

■ HOW LONG WILL LEAK ARMOR REMAIN IN THE SYSTEM?

It will remain in an active form for up to 10 years or longer protecting the system against micro leaks. As with any chemical mixture it will eventually break down into non active by-products which are safe and compatible to components, oil, and refrigerant and will not affect systems performance.

■ WHAT HAPPENS IF A LINE BURSTS ON A SYSTEM CONTAINING LEAK ARMOR?

Along with the refrigerant and oil, approximately ninety five percent of the sealant is carried out of the system. The remaining five percent of sealant will remain in the oil sump and condenser in a stable soluble oil state as a non reactive.

■ WHAT HAPPENS TO SUPERSEAL IF I NEED TO RECLAIM THE REFRIGERANT?

It is removed from the AC or refrigeration system with the refrigerant and carried through the recovery machine to the recovery tank. Any repairs to the system are carried out using standard methods you would typically use on a unit, such as cleaning brazing points and using nitrogen when brazing.

■ HOW DO I CLASSIFY RECOVERED REFRIGERANT FROM A SYSTEM WHICH HAD LEAK ARMOR?

As long as the system did not experience a burn out or a compilation of mixed refrigerants, the recovered refrigerant needs only to be identified as used when returned to a refrigerant recycling depot. Cliquight sealants are vacuum packed, particle free and contain no propellants such as propane or isobutane and will not contaminate refrigerants. The sealant is a liquid and is easily separated with the oil during the recovering process.

■ HAS THE CHEMICAL TECHNOLOGY IN LEAK ARMOR EVER BEEN USED BEFORE?

Yes, the sealant technology in Leak Armor has been used for decades to seal leaks in underground gas transmission lines, as well as in pipes, tanks, compressors and gas pressurized vessels

■ ARE THERE ANY CHECKS TO BE COMPLETED BEFORE INSTALLING LEAK ARMOR?

Yes, verify the system temperature readings: the temperature at the compressor base should not be in excess of 130°F/54°C, compressor discharge temperature above 225°F/107.2°C or a 2 degree or greater temperature differential across the liquid line drier. Should these conditions exist you must treat the system as contaminated with particulate and proceed accordingly.

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■ FAQ'S DRY R™

■ WHAT IS DRY R? HOW DOES IT WORK?

Dry R removes 60 drops of water, dissolves blockages, frees up metering devices, reduces compressor draw, and internal formicary corrosion. The active ingredient in Dry R is referred to as a hydrolytic. Dry R eliminates moisture from the system by chemically disassembling the H₂O molecule and reorganizing it into two new stable products. No particulates, gels, or polymers are formed. By eliminating moisture, Dry R™ allows the oil to continue to condition and stabilize the refrigeration system. DRY R does not mask water by raising the freezing point, as in the case with alcohol products, used in glycol mixtures.

■ WHEN SHOULD DRY R BE USED?

Dry R is essential for new or old systems and should be installed anytime a system is opened for repairs. Dry R is compatible for eliminating moisture in all refrigerants & oils. Dry R eliminates the need to change out a drier with high moisture levels.

■ IS DRY R ABLE TO REMOVE BLOCKAGES?

Yes, Dry R™ is effective in breaking down blockages, removing varnish films, and scale on moving parts such as TXV's, caused by moisture.

■ IS DRY R COMPATIBLE WITH ALL OILS AND REFRIGERANTS, INCLUDING 410A?

Yes, Dry R is packaged in a vacuum and uses the system's refrigerant to charge the can and propel it into the system.

■ HOW WILL DRY R™ AFFECT DRIERS AND METERING DEVICES?

Dry R does not have any negative effect on driers or metering devices, but will eliminate system moisture, ice crystals, reduce scale and sludge formation.

■ WILL DRY R™ HARM MY MANIFOLD GAUGE SET OR RECOVERY EQUIPMENT?

No, Dry R has non-aggressive properties and is equipment safe. When recovering refrigerant containing Dry R, the product safely passes through the gauges/recovery unit, and on to the reclaim tank. During this operation, moisture present in the manifold gauge set and recovery equipment is removed.

■ HOW DOES DRY R™ IMPROVE THE PERFORMANCE OF AN AC/R SYSTEM?

By chemically disassembling the H₂O molecule and removing up to 60 drops of water, dangerous levels of moisture are removed, reducing call backs on warranty coils & compressors. This reaction also forms chemical agents which boost oil and refrigerant performance, critical to new or old systems, providing true energy savings to home owner.

Example: A 3 ton air conditioner containing 60 drops of water can add \$16.80 to normal operating costs/ month. Adding 1 can of Dry R will reduce this \$ cost within 24 hours. (Based on .17 cents/ Kilowatt hr)

■ HOW LONG WILL IT REMAIN ACTIVE IN THE SYSTEM?

It will remain active, eliminating moisture, until the system is opened up for repair, or if a major loss of refrigerant and oil occurs.

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