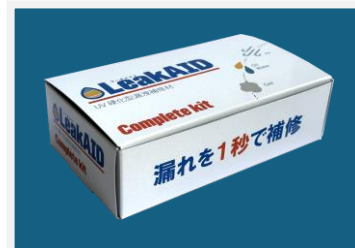


LL-100-LACK LEAKAID Complete KIT



Thank you very much for purchasing our UV curable leak repair material, "LEAKAID". Please read this instruction manual carefully and use the product properly. Please refer this manual whenever necessary.

"LEAKAID" is a high-performance leak prevention repair material designed for effective application on various oil, water, and gas leaks. This innovative material cures rapidly upon exposure to UV light, providing a reliable solution for leakage control. With its superior adhesive strength, LEAKAID is capable of addressing leaks in circumstances where traditional putties and other repair materials may prove inadequate. It is particularly effective for hydraulic, air, and refrigerant piping applications, where complete removal of oil is not always feasible. For the detection of minor leaks, it is advisable to utilize a fluorescent agent together with UV light to ensure accurate identification.

Product Specifications

Model number	10g:LL-100-LA10G 180g:LL-100-LA180G			
Characteristics (before/after hardening)	Liquid / Solid			
Type	1-component UV-curable acrylic resin			
Breakdown voltage [KV/mm]	51			
Colour	Pre-curing	White	Post-curing	White
Warranty period	1 year after shipping the product (Unopened • Stored at the room temperature • Dark room.)			
Manufacturing country	Japan			
Adhesion to various materials *(#1000 grade sanding paper)	Recommended	Stainless steel, cast iron, hard PVC, acrylic (PMMA), glass, galvanized, carbon steel, brass, aluminum, copper, ABS resin		
	Applicable	Olefin resin (PP/PE)		
	Non-applicable	Silicone resin/fluorine resin (seal tape)		

Recommended Curing Conditions

Coating thickness	1-3mm (per layer)
Irradiation distance	Within 1cm
Irradiation time	1 second or more depending on the irradiation area

*When using recommended UV light

Safety precautions



Before using the product, be sure to read this manual. After understanding the contents, the product should be used by a person familiar with piping, machinery, and other repair work.

- When engaging in work activities, wearing appropriate personal protective equipment, including gloves, safety glasses, and masks is essential. This sealant can irritate the eyes and may cause skin irritation. It is important to avoid any contact between the product and your eyes or skin and to prevent inhalation of its vapours. In case of eye contact, rinse your eyes thoroughly with water for several minutes and seek medical attention immediately. If the product comes into contact with your skin, wash the affected area promptly and thoroughly with water and mild soap.
- Please refrain from allowing exposure to heat, sparks, open flames, heated materials, and other potential ignition sources. Such actions may result in the occurrence of a fire.
- Use in a well-ventilated area.
It may be hazardous to your health.

- During the ultraviolet (UV) curing process, the components of the sealant may volatilize. Therefore, it is advisable to avoid positioning oneself close to the sealant or directly inhaling any vapours emitted during this curing phase. Failure to observe this precaution may present potential health risks.
- If sealant adheres to clothing, remove or take off clothing immediately. The sealant will be hot immediately after curing. If the sealant adheres to clothing or gloves and is exposed to UV light, it may harden and cause burns.

About Handling

1 During transportation/storage

- Store at room temperature (5-35°C) and out of direct sunlight.
- Tighten the lid securely before transporting and storing.

2 When working

- It will harden if exposed to sunlight, so please open it in a place that is protected from sunlight.
- Fasten the cap each time you use it. Doing so may cause contamination of foreign matter or inadvertent curing (due to UV-containing lighting such as sunlight or fluorescent lamps).
- Please use appropriate protective equipment during application and curing work.
 - Protective gloves (natural rubber gloves, etc.)
 - Safety glasses (those that can prevent liquid splash back and limit UV rays)
 - Protective face or mask

3 After use/disposal

- When disposing of the remaining sealant, spread it on a noncombustible material such as a metal plate and cure it with UV light before disposing of it properly.
- Please dispose of it properly, separating it from waste containing solvents.

4 Disclaimer

- Before utilizing this product, it is imperative to conduct a comprehensive assessment to determine its suitability for the intended purpose, application, and prevailing conditions. Additionally, it is essential to adhere strictly to the guidelines outlined in the instruction manual and the specified work procedures. AirMore Co. Ltd. shall not assume responsibility for any damages resulting from noncompliance with the prescribed instructions.
- This product's performance may be affected by various factors, including construction site conditions, environmental influences, and the state of the construction area. Therefore, the results of sealing cannot be guaranteed.

Post-Installation Instructions

It is important to remove as much of the sealant as possible using a clean cloth and to thoroughly clean all installation tools immediately after use. Use a suitable cleaning solution, such as hexane or an alcohol-based solvent (for example, a parts cleaner), for this task. Once the sealant has cured under ultraviolet (UV) light, make sure to dispose of the sealant-laden cloth properly. Additionally, ensure that this disposal is done separately from waste that contains solvents.

About UV Light /LL-100-UVL

◆How to Use

1. Remove the tail cap and insert the included AAA batteries.
The positive terminal (+) of the battery faces the head (back side) of the light, and the negative terminal (-) faces the tail.
Note: When not using the product for a long period, please remove the batteries and store it.
2. Please secure the tail cap firmly.
3. Press and release the switch located on the tail once to turn on the light.

◆UV Light Specifications

Model number	LL-100-UVL
Central wavelength	365nm
Light source	UV LED
Accessories	AAA batteries x 2
Sold separately	UV cut goggles TP9939

◆Safety Precautions

- Please refrain from pointing the UV light at people.
- The product must not be modified or disassembled under any circumstances. Also, please be careful when handling in the event of damage or contamination.
- Do not use in places exposed to direct sunlight or in areas of high or low temperatures.
- Should any abnormalities arise, such as significant heat generation, unusual noises, or atypical odors, it is essential to immediately deactivate the light and remove the dry cell batteries.
- Batteries should be removed from the UV light when the device is not in use to mitigate the risk of unintentional activation, which could result in elevated temperatures.

POINT (1): Dangers of UV

When using UV lights, be sure to wear UV-blocking goggles. In addition to avoiding looking directly at the light source, be careful not to reflect UV light.

POINT (2): Selection of UV lights

LEAKAID can be cured with UV lights made by other companies or UV contained in sunlight, but UV with low illuminance may not cure sufficiently and the sealing performance may not be demonstrated, so please use this LL-100-UVL (UV light) exclusively for LEAKAID.

*** For optimal performance, apply LEAKAID to a surface thickness of 1 to 3 mm. Position the UV light within 1 cm of the surface and irradiate for at least 1 second per square centimeter.**

Product Composition

◆LL-100-LACK LEAKAID Complete KIT configuration



	Product	Contents	quantity
1	LL-100-LA10G	LEAKAID UV curing leak repair material 10g	1
2	LL-100-UVL	LEAKAID exclusive UV light (includes 2 AAA batteries)	1
3	-	Wood bar for application	2
4	-	Silicone sheet (7cm x 7cm)	1

How to use silicone sheets

The sealant does not adhere to the silicone sheet. Place the sealant on the silicone sheet and press the silicone sheet against the leakage area.

By irradiating the silicone sheet with UV light in this state, the sheet will peel off cleanly after curing, resulting in a clean finished surface.

◆Optional items

Product number	Name	quantity
LL-100-LA10G	LEAKAID UV curing leak repair material 10g	1
LL-100-LA180G	LEAKAID UV curing leak repair material 180g	1
LL-100-UVL	LEAKAID exclusive UV light (body only)	1
9998-AAA4	AAA batteries for UV light	1
LL-200-UB3	Wood bar	3
LL-200-SS5	Silicone sheet (7cm x 7cm)	5
LL-200-SS1	Silicone sheet (7cm x 100cm)	1
TP9939	UV-cut goggles (transparent type)	1

*Shipping units are provided according to the specified quantity. It is important to note that product specifications and prices may change without prior notice.

Warranty period

The warranty applies for ONE year from the date of shipment.

It is important to note that this warranty is valid exclusively for customers who have purchased the product from AirMore Co., Ltd. or its authorized distributors. However, this warranty does not extend to consumable items. LL-100-LA10G, LL-100-LA180G, and LL-100-UVL lights are covered under this warranty terms. Furthermore, please understand that we are unable to provide warranty coverage once the package has been opened. The warranty excludes defects or malfunctions arising from improper or careless operation, accidents, or storage and usage under unsuitable conditions. The product may undergo partial improvements without prior notice, and we advise all customers to consider this information accordingly.

Get Started

LL-100-LACK LEAKAID Complete KIT



This section provides examples of work procedures for repairing oil leaks using LEAKAID. However, it does not encompass all types of repair work. Please make adjustments based on the specific work environment and the area being repaired.

Step1 : Preparation

1 Determine the source of the leak.

For trace leaks, we recommend detecting leaks using a fluorescent agent and ultraviolet light.

2 Surface Preparation.

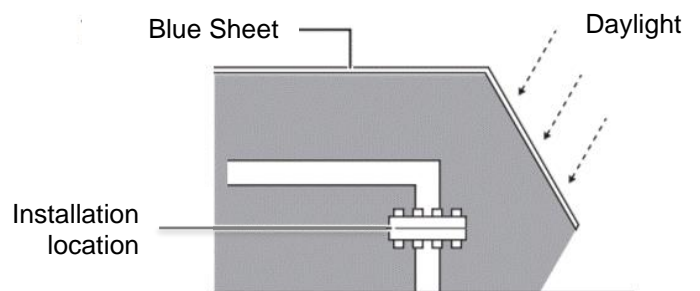
Use a belt sander or similar tool to remove paint and rust from the leaking area, as well as the surrounding areas.

POINT

- Failure to remove paint and rust may lead to poor sealing performance.
- When using a belt sander, ensure the sealant is kept away from flying spark.

3 Shade with a blue sheet or similar material to prevent direct or reflected sunlight. (Indoors or in a sunlit room)

When exposed to UV, such as sunlight, the sealant cures quickly



4 Thoroughly clean and degrease the bonding surface using a rag, parts cleaner, or a similar product.

POINT

- Although it is possible to apply the adhesive on an oily surface, it is recommended to degrease the surface as thoroughly as possible beforehand. The adhesive will adhere more effectively to a surface that is free of oil.
- Cleaning and degreasing should be performed regularly for each application area.

5 Wipe off any moisture on the adhesive surface.

POINT

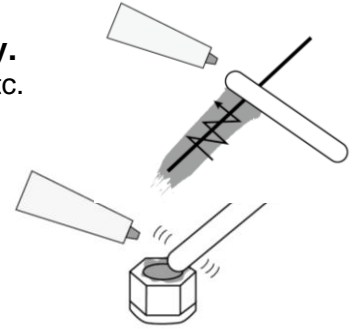
- If moisture is present on the adhesive surface, the sealant will not adhere properly.
- In conditions of high humidity where condensation may form, it's important to dry the surface using a hair dryer or a similar tool.
- Specifically, if there is frost in the refrigerant piping, remove the moisture thoroughly.

Step2 : First Layer Application and Curing Process

- 1 Apply sealant starting from the areas that are difficult to apply.**
Rub the sealant firmly against the adhesive surface using a wood bar, etc.

To apply sealant to narrow gaps, use a wood bar and jiggle it to spread the sealant.

Sealant tends to flow when it is properly applied with movement using a wooden bar.



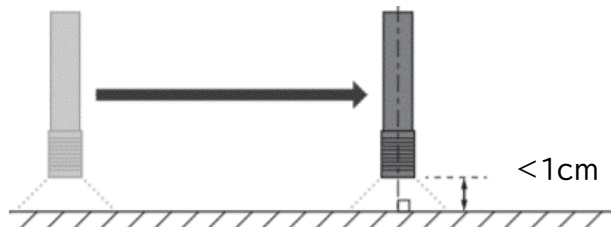
KEY-POINT

- To ensure proper adhesion, firmly rub the sealant onto the adhesive surface, as trace amounts of oil or abrasive powder may remain.
- If there is a significant delay between application and curing, an oil path may develop, leading to potential re-leakage. In such cases, it's advisable to repeat the application and curing process several times.
- Due to optimal results, we recommend a layer thickness of 1 to 3 mm. Applying the sealant too thin or too thick can result in adhesive failure.
- Rubbing will spread and thin the application, so rake it up with additional sealant if needed.

- 2 Irradiate the coated area with UV light from a distance of 1 cm or less for at least 1 second to cure the coating.**

UV should be applied perpendicular to the surface to ensure it penetrates deeply into the coating.

Do not turn off the UV light during irradiation; instead, move it slowly.



POINT

- Immediately after application, cure the product using UV irradiation.
- Avoid exposing the product to UV light while shaking it. The key is to irradiate slowly, ensuring you spend at least 1 second on each spot.
- Irradiate with caution, particularly in hard-to-reach narrow areas.
- For areas that cannot be directly exposed to UV light, use a mirror or a similar object to reflect the UV light to hit the inaccessible regions.
- Especially, when working with a mirror, ensure that no one is nearby.



Caution



Do not look directly at the light source when the UV light is on.

Doing so may cause eye damage. Be sure to wear UV-blocking glasses or goggles (TP9939) while working.



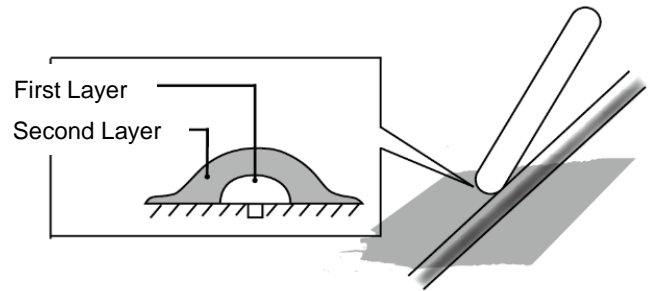
If sealant spills on clothing, remove the clothing immediately.

Sealant becomes hot immediately after curing. If the sealant sticks to clothing or gloves and is exposed to UV light, it will harden and may cause burns.

Step3 : Second Layer Application and Curing Process

- 1 Clean off any moisture from the surface of the first layer of cured sealant using a parts cleaner or rag, and then apply a second layer of sealant.

In order to improve the adhesion surface to the contact point, the subsequent overlapping coat needs to extend over a larger area than that of the initial layer.



KEY-POINT

- Applying the sealant in multiple layers rather than just one, helps prevent air bubbles and unevenness, leading to better sealing performance.
- It is advised to ensure that the final thickness of the sealant is at least 4 mm or more.

- 2 Shine the UV light on the overlapping areas to cure them.

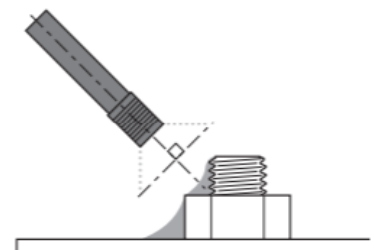
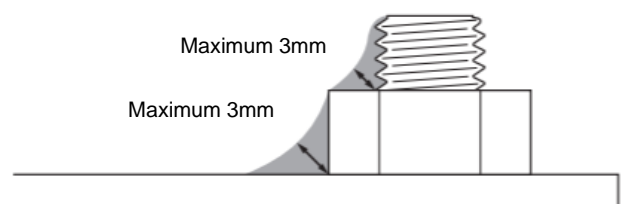
Step4 : Confirmation of Installation Area

Carefully inspect the entire surface using an inspection mirror or similar tool. If you find any uncoated areas, such as missing parts, gaps, or pinholes, please repeat the above: Step 3: Second Layer Application and Curing Process.

Key Points of the Installation

Base of bolt or nut

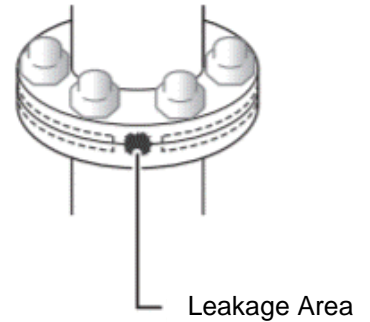
- The thickness of one layer should be a maximum of 3 mm. If it is too thick, the UV rays will not reach deep into the sealant, leaving areas that cannot be cured, resulting in insufficient sealing performance.
- When shining apply the UV light perpendicular to the coated surface as shown in the diagram.



When a large amount of oil is leaked, such as from the outer circumference of a flange.

Begin installation around the perimeter of the flange at the point where no oil leakage has occurred.

If oil is applied first at the leaking area, new leaks may occur in the areas that previously had no leaks.



1. Install where no oil leakage has occurred.

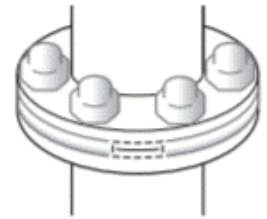
First Layer Application and Curing Process

Apply multiple coats and allow them ample curing time to prevent oil paths and leakage.



Second Layer Application and Curing Process

The application and curing process occurs in batches without multiple coats.



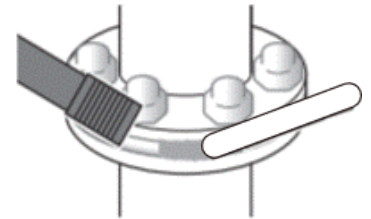
2. Install the Oil Leaking Area.

If oil is leaking, clean the area and press hard on the leak with a rag until just before applying treatment.

After applying the sealant and quickly blending it with the oil, immediately cure it using UV light.



After the oil leak is stopped, a larger area is reinforced by applying an overlay and allowing it to cure.



KEY-POINT

- The application and curing processes should be done swiftly.
- It is advisable for two people to work on the coating: one for applying it and another for curing it with UV light.

When removal is necessary

- If you want to remove the sealant, use a tool such as a tugger for the removal process.
- Please be careful not to damage the equipment due to the impact of your work.
- When using copper piping for refrigerant, carefully scrape the tubing with a bar file, being cautious to avoid damaging it.

LEAKAID Key points video

*The code below is a two-dimensional barcode of a YouTube video.



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