

Lifting Latent Fingerprints Off Unusual Surfaces

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Extruder Gun

Use to lift tool marks and latent prints

What a pain to be on a crime scene at 2 a.m. and have to mix ingredients together to cast a tool impression on a doorjamb! It's hardly worth the mess so instead of casting it you just photograph it. Try the Extruder gun instead. It acts like a caulking gun. Simply insert a double cartridge into the gun, put on a special mixing tube and then squeeze the trigger. The polyviylsiloxane (PVS) compound will come out through the mixing tube that is laced with veins to mix the two compounds. When it comes out, the compound is thoroughly mixed. Apply it directly to the area you want to cast and use the tip to stir the compound to remove any air bubbles that may be trapped. It dries in a relatively short time depending on the air and surface temperature. Your cast with the extruder gun will produce very fine detail.

Note: When applying over latent prints be careful not to allow the tip to touch the latent print as it could damage and possibly ruin the latent print.

Tool marks and impressions have long been excellent evidence when developing a case. The problem in the past has been the ability to make clean impressions in awkward places. The Extruder Gun automatically mixes the polyviylsiloxane (PVS) perfectly every time through the mixing tip. The cast will set quickly and is easy to remove from the surface you are casting. Ideal for field use on both tool-mark impressions and as a lifter for fingerprint powder on textured surfaces.

Diff-Lift Tape

Lift latent prints off textured surfaces

Does this sound familiar? You're on a crime scene and have just located a great latent fingerprint. The only problem is it's on a surface that will be very difficult to lift the print from, it is textured! You place some tape on your **one good print**.... and this is what you get! (see **figure 1**)

The new DIFF-Lift is a soft tape-like substance discovered to be useful lifting powdered latent fingerprints on textured surfaces. DIFF-Lift fills in the contours of textured surfaces and lifts **ALL** of the powdered print. (see **figure 2**)

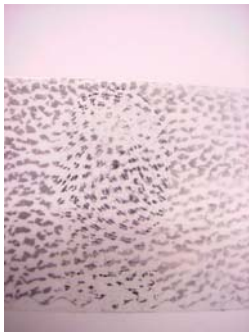


Figure 1



Figure 2

DIFF-Lift comes in 60" rolls 1½" wide. The surface density is extremely low so the adhesive surface goes into all bumps and valleys of a difficult surface.

Diff-Lift is used just like standard fingerprint lifting tape. It comes on a roll, which can easily be handled. Use your index finger and press firmly on the dusted latent print only. You should be able to run your finger gently over the tape and feel the texture of the surface through the tape. Lift the latent fingerprint with the DIFF-Lift tape and place it on a contrasting backing card.

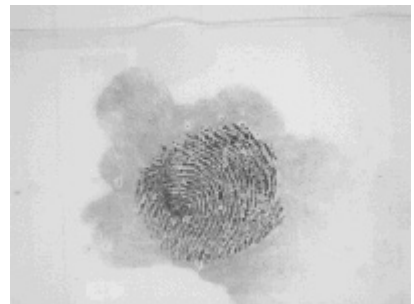
NOTE: You will need to cut the DIFF-Lift with scissors or a sharp knife. You can not tear it. Always fold the end over after you cut it. This way you are ready for the next time you use the DIFF-Lift.

Polyethylene Tape

Lifting latent prints off multi-contoured surfaces

In some cases, processing items is the easiest part of the procedure. After the latent print has been developed, it is time to lift the developed print. Standard lifting tapes work fine on flat and single curved surfaces (such as a glass, pop can, etc.). What happens when you have to lift a latent print off a doorknob, light bulb or the inside of a bowl? When dealing with a multi curved surface, polyethylene tape is the way to go. It will stretch and conform to light bulbs, doorknobs and bowls without distorting the latent print when lifted.

Polyethylene tape is easy to use. Cut off the desired length of polyethylene tape. Press it directly on the print with your thumb then work the tape out from the center. Remember that what you are concerned with is the latent print. If you get a wrinkle or crease away from the latent print, it's okay. This will not affect the comparison.



Wet Print

Develop and lift latent prints off wet surfaces

Wet Print is like liquid fingerprint powder. When sprayed on the surface of non-porous wet evidence, the micro fine particles attach themselves to the latent print residues as the solution runs off the surface. The residue is sprayed with water to remove excess and when dry the developed latent fingerprints can be lifted with lifting tape.

Potential Uses:

1. Processing non-porous items covered with water or snow.
2. Developing latent prints on non-porous items that have been lightly washed.
3. Processing items in situations where mud, dirt, or heavy dust has covered prints making them impossible to develop by conventional means.

General comments for optimum results

1. Objects should be as close to room temperature (70°F) as possible.
2. Wet Print 1 and 2 used as spray should also be at (70°F).
3. Always use fine mist soft mist when spraying.
4. Wet Print dries silver on dark objects and dark on light colored objects.

Instruction for Use:

Wet Objects:

1. Shake Wet Print 1 container to disperse solids. Turn spray nozzle to off before shaking and after use to prevent leaking.
2. Adjust spray nozzle for fine soft spray and test.
3. Spray Wet Print 1 onto the wet surface allowing the agent to roll down and spread over the suspected fingerprint area.

4. Repeat Wet Print 1 spray 3 to 4 times or until print is completely developed., allowing 30 to 35 seconds between each subsequent application.
5. If details in the print appear to be clogged with residual Wet Print agent, spray a fine mist of clear water from Wet Print 2 container over the developed latent fingerprint.
6. Once prints are fully developed, photograph and let air dry or quick dry with a hair dryer. DO NO OVERHEAT!
7. Dried print may then be re-photographed and lifted by conventional means. Be sure print is dry before lifting.

Dry Objects:

1. Adjust spray nozzle on Wet Print 2 container for fine soft spray of water and test.
2. Using Wet Print 2 container wet the surface with a light spray of water.
3. If item is particularly dirty, spray fine mist until all dirt washes away. Do not wipe suspected fingerprint area.
4. Proceed processing following steps 1 through 7 above for wet objects.

LIQUI-LIFT

Develop your latent print with magnetic or standard powder and photograph

1. Place thin line of Liqui-Lift solution just above the powdered latent print.
2. Use a business card or piece of cut down backing card to gently spread the Liqui-Lift solution. Hold the card lightly between your index finger and thumb. Place the card above the solution and gently pull down spreading the solution over the latent fingerprint. This will create a thin layer of the solution on the latent print. The thinner the better.
3. Allow the solution to completely dry. A blow dryer may be used, but DO NOT overheat!
4. Place lifting tape over the entire print, make sure you have pressed out all air bubbles, and that the tape has made full adhesion to the surface, then lift the print slowly and carefully. Then place the lift on a contrasting backing card.

HELPFUL TIP - Always develop a test print on the same surface, so you will know when it's dry enough to make your lift.

GOO Print Powder

Develop prints on adhesive side of tape

Goo Print Powder is excellent for developing latent prints on the adhesive side of tapes and labels.

Kit contents:

- 1 - All Purpose Brush
- 48 grams Goo Print Powder
- 4 oz Dispersing Solution
- 2 - Mixing Jars
- 3 - Mixing spoons
- 1 - Liquid mixing bottle
- 2 - Bulb pipettes

Mixing Instructions:

In mixing jar place small amount of Goo Print Powder (2-3 spoonfuls using mixing spoons) in mixing jar.

In liquid mixing bottle place **equal amounts** of water and Dispersing Solution using the bulb pipettes.

Gradually add the water and Dispersing Solution to the Goo Print Powder and mix with the mixing spoon until the mixture is the consistency of thin paint.

Application:

Use the all-purpose brush to paint the mixture onto the adhesive side of the tape or label.

Let the solution set on the tape or label for 10 to 15 seconds and then rinse off under running water.

Note: If the solution is left on too long, it becomes difficult to rinse off. The solution will adhere to strongly to some tapes and labels.

Photograph any developed latent prints.

Mikrosil

Use to lift tool marks and latent prints

Mikrosil has been formulated to give excellent rendering of small details, highest contrast for microscopical observations, good releasing ability and short setting time. These properties are of special importance with shallow marks and marks with small details requiring large magnification. It is also suited for lifting developed latent fingerprints from textured surfaces. Mikrosil comes in various colors, white, black, gray and the original brown. Select a color to contrast with the powder being used. Brown is best suited for tool marks.

Procedure for use

From the large Mikrosil tube squeeze out approximately 1-cm onto supplied mixing card. Add approximately 1-cm of the small tube of hardener.

Note: Discard the first inch of hardener when tube is first opened.

Note: If you need a larger amount mixed up, squeeze out equal lengths of Mikrosil and hardener.

Use supplied mixing sticks and thoroughly mix until a uniform color is achieved. Mixing time 1½ minutes.

Apply the mixed Mikrosil to the tool mark or developed latent fingerprint, using the mixing stick. When applying to developed latent fingerprints do not allow the mixing stick to scratch the developed latent fingerprint.

Cut the enclosed foil to a desired size. Place on a pad of paper and write identifying information (case number, date, item number, collector's initials) on the smooth side with a scribe, pen or pencil. Press the label into the Mikrosil before it sets. The information will be permanently recorded in the cast by using this method.

Setting time: 5-8 minutes at 68 Fahrenheit
12-15 minutes at 14 Fahrenheit

The setting time can be shortened by increasing the amount of hardener or lengthened by decreasing it. Do not add more than 6 % hardener.

6. Close cap tightly on both the Mikrosil and hardener when done.

PATHFINDER

ELECTROSTATIC DUSTPRINT LIFTER

The Pathfinder Electrostatic Dustprint Lifter is the most compact, easiest to use dustprint lifter available on the market today. It weighs only 8.6 oz., and its compact size (6" x 3" x 15") makes it great to take directly to the crime scene. It even comes with a handy carrying case that will slide right on your belt.

Its advanced design has totally eliminated the need for connecting wires of any type. It is powered by one standard 9-volt battery eliminating the hassle and downtime of recharging.

HOW IT WORKS

Horizontal Surfaces

1. Photograph any visible dustprint, use side lighting to enhance the dustprints.
2. Place the dark side of the lifting film over dustprint or area to be processed.
3. Place the silver covered ground plate next to film leaving a space of approximately 1" between the lift film and the ground plate.
4. Place the Pathfinder down onto the ground plate and the film with two contact points touching the ground plate and the single contact point touching the lift film.
5. Turn on the power and increase the voltage to maximum. The film will adhere to the area.
6. Turn off the power after the film has completely adhered to the area.
7. Remove the Pathfinder from the film, lift the film off the area being tested.
8. Place the film with the dark side up on a flat surface.
9. Examine the film with side lighting to view the lift.
10. Photograph any visible dustprint, use side lighting to enhance the dustprints.

Vertical Surfaces

1. Photograph any visible dustprint, use side lighting to enhance the dustprints.

2. Apply small pieces of tape to the corners on the dark side of the film and place the film over dustprint or area to be processed with the dark side out and secured at the corners with the tape, to hold the film in place.
3. Tape the silver covered ground plate next to film leaving a space of approximately 1" between the lift film and the ground plate.
4. Place the Pathfinder down onto the ground plate and the film with two contact points touching the ground plate and the single contact point touching the lift film.
5. Turn on the power and increase the voltage to maximum. The film will adhere to the area.
6. Turn off the power after the film has completely adhered to the area.
7. Remove the Pathfinder from the film, lift the film off the area being tested.
8. Place the film with the dark side up on a flat surface.
9. Examine the film with side lighting to view the lift.
10. Photograph any visible dustprint, use side lighting to enhance the dustprints.

Transportation and Storage of Lift

The film has a static charge that holds the dust particles to it. With this in mind, if the film is exposed to dust in the air, it will be attracted to the film and could cover the developed print.

It is recommended that the lift with the dustprint be placed in a thin box and taped to the bottom, and then the lid properly secured to prevent dust from entering.