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## TECHNICAL INFORMATION

### Adhesive-Side Powder Development

Catalog Nos. ASP150, ASP50D, ASP50L, TRA20

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#### INTRODUCTION

Adhesive-Side Powder is used to develop latent prints on the adhesive surface of tapes, labels and the like. Excellent results may be achieved on duct tape, plastic tapes (clear, frosted and opaque), paper labels and tapes (except those with water-activated adhesives), vinyl packing labels and paper-backed adhesive labels. Poor to excellent results are possible on cloth surgical tape—excellent fidelity but low contrast.

Select ASP50D dark powder or ASP50L light powder for surface contrast. *Note: Do not use this material to process surfaces such as gummed labels with water-activated adhesives.*

#### CAUTIONS

- Before using this kit, consult the appropriate Material Safety Data Sheets (MSDS) found on our website at [www.sirchie.com/support](http://www.sirchie.com/support).
- Wear disposable latex gloves to avoid contaminating the surface to be tested.



- Avoid inhalation of the powder. Wear a nuisance dust mask as necessary.
- Use only with adequate ventilation—TRA20 contains Chloroform. Keep cap tightly closed when not in use. If adequate ventilation is not available, wear a respirator equipped with organic vapor cartridges.
- Vapors from TRA20 are extremely flammable. Do not use near sparks or open flame.
- Perform tests on non-evidential materials to gain familiarity with the processes.
- Some adhesives are so aggressive that normal development times result in completely filled-in backgrounds. Use the immersion method on tapes as recommended.

## PROCEDURE

### Paint Method

The *Paint Method* for developing prints offers rapid development at the expense of the loss of fine control over the degree of development. This method offers predictable results with common classes of tapes and adhesives such as duct tape, vinyl and paper-backed labels.

### EZFLO Solution

EZFLO is a surfactant solution used to reduce the stickiness of the adhesive surface of tapes and labels. EZFLO is supplied as a concentrate. Prepare a working solution for the *Paint Method* by filling the 6 oz. bottle 1/2 full of concentrate, and then filling the bottle with water. Shake lightly to aid mixing.

1. Photograph any visible prints before following the next step. Be certain to include a scale in the photo.
2. The adhesive surface to be processed should be fully exposed and untangled. If the tape is tangled, attached to a surface, or stuck to itself, use the Adhesive Tape Release Agent discussed later to free the tape before applying Adhesive-Side Powder. Be certain to allow the release agent to evaporate before proceeding.

### Preparation

1. Place one teaspoon (5ml) of powder into the mixing bowl provided.
2. Add one teaspoon (5ml) of EZFLO working solution prepared earlier.
3. Using one of the developing brushes provided, stir the powder into the EZFLO working solution until it has completely mixed. Stir while pressing down on the brush handle with enough pressure to flare the brush bristles fully out. The resulting mix will appear as a frothy charcoal gray liquid that readily clings to the brush, dripping only slightly.

### Use

1. Lay the tape out on a flat, non-absorbent surface.
2. Use tweezers to hold the tape in place. With the development brush loaded with compound, gently paint the solution over the surface to be processed in a smooth, continuous motion. Do not allow the brush to become dry as friction between the brush and the adhesive surface causes streaking and loss of contrast. Rotate the brush 1/4 turn between strokes to best utilize the liquid carried by the brush.
3. For maximum contrast with the background, leave the mixture on the surface for no more than 15 seconds. A good rule of thumb is to look at your watch as you finish painting an area, and then allow 10 seconds before beginning to rinse. Rinse the developing solution from the tape with a gentle stream of running water or by agitating it in water and EZFLO Working Solution mixed 20-to-1 in the rinse basin provided.
4. Photograph any useful prints after each development cycle. If prints are too light, repeat the development process. If the article shows signs of background darkening, or if development is still too light after a second painting, switch to the *Immersion Method* described below to better control additional development.



## Immersion Method

The *Immersion Method* of developing prints offers more control over the degree of development, but it takes a longer time. Except in fresh solutions, immersion prints tend to have lower contrast than those developed with the paint method. The *Immersion Method* is especially useful on frosted tapes and on tapes that have been untangled using the Adhesive Tape Release Agent (TRA20), and it is the recommended method on tapes with particularly aggressive adhesives.

Immersion solutions are obtained either by saving the rinse water from the *Paint Method* described above or by preparing a solution especially for this purpose. Use the rinse basin and lid provided to keep dust and other materials out.

Immersion solutions can be reused but will develop only a finite number of prints. As the ingredients are used up, development becomes slower and developed prints will be progressively lighter until no visible development takes place at all. When in doubt, mix a fresh solution or test with a test print of your own on duct tape or a hinge lifter. If the exemplar develops poorly, mix a fresh solution. **Note:** *This process is non-destructive in the sense that a print that failed to develop due to exhausted immersion solution will develop in a fresh solution.*

### *Preparation of Immersion Solution*

**Caution:** *DO NOT attempt to prepare the solution by pouring the powder into the EZFLO solution.* It is difficult and time-consuming to mix in the powder. Instead, mix the powder as follows:

1. Fill the rinse basin with water and EZFLO working solution. A ratio of 20 parts water and 1 part EZFLO working solution is recommended. More EZFLO is preferable to less; however, the exact ratio is not critical.
2. Place 1 teaspoon (5ml) of developing powder into a separate mixing bowl.
3. Add 2 teaspoons (10ml) of EZFLO working solution.

4. Stir the powder into the EZFLO working solution using a development brush until the powder is completely in solution. Stir while pressing downward on the brush handle with enough pressure to flare the bristles fully out.
5. Add this mixture to the EZFLO working solution prepared in Step 1 above, rinsing the mixing bowl and the brush in the solution in the process.
6. Adding additional powder to the solution speeds development. Mix as in Steps 2-5 above.

#### *Use*

1. Photograph any visible prints before beginning.
2. The adhesive surface to be processed should be fully exposed and untangled. If the tape is tangled, attached to a surface, or stuck to itself, use the Adhesive Tape Release Agent to free the tape before using the *Immersion Method*. Be certain to allow all of the release agent to evaporate before attempting development.
3. Stir the solution to ensure the powder particles are in suspension.
4. Submerge the tape, adhesive side up, in the solution and allow particles to settle onto the tape.
5. Using the tweezers provided, agitate the tape at regular intervals so as to remove loose powder particles, and observe the state of development. Hold cloth surgical tape above the bottom of the bowl to prevent the development of a penetrating stain on the backside of the tape. View development with a fingerprint magnifier.
6. Remove the tape from the solution when the desired degree of development is reached.
7. Photograph any useful prints. Be certain to include a scale in the photos.



**IMMERSION METHOD**

## Adhesive Tape Release Agent

No. TRA20 Adhesive Tape Release Agent allows separation of the adhesive surfaces commonly found on tapes and labels without destroying latent fingerprints that may be present.

### *Procedure for Using TRA20*

1. Locate one end of the tape. If possible, use tweezers to grasp a piece of the tape near this end.
2. Apply one drop of release agent to the edge of the tape at the intersection. Tilt the tape to allow the release agent to flow along the full length of the intersection. Very slowly, and with only slight, even pressure, pull the tape apart.
3. Watch for development of ligatures (adhesive strands) between the two surfaces being separated. When these structures appear, apply additional release agent to avoid damaging the adhesive surface.
4. Apply one additional drop of release agent at one edge of the tape, allowing the drop to flow along the intersection and resume separation.
5. Repeat this procedure until the surfaces have been fully separated.
6. Allow sufficient time for the release agent to evaporate before attempting to recover any latent fingerprints.
7. Process the tape with ASP50 Adhesive-Side Powder.



### Special Notes

- Recently separated surfaces are very sticky. **DO NOT TOUCH!** **DO NOT** allow dust or other contaminants to come into contact with these surfaces. Rinsing in clean water will sometimes reduce tackiness. Store the separated tape in a protected environment until all traces of release have evaporated—overnight if possible—but for at least 15 minutes.

- Release agent disturbs the adhesive surface at the point where a drop is applied, and in a band where the drop flows across the tape. Latent prints subsequently developed will show a band of lighter development at these points. To lessen the prominence of these bands, allow release agent to evaporate overnight. Applying a drop near the edge of the tape causes lightening of the detail. If your experience shows that vital information more often occurs along the edge of the tape, change the point of application accordingly.
- Apply release agent ONE DROP at a time and only as needed.
- Apply release agent only where necessary. DO NOT apply release agent to adhesive surfaces that are not stuck together.
- DO NOT immerse tape in release agent.

**ASP150 CONTENTS:**

- 1- ASP50D Adhesive-Side Powder (dark), 50g
- 1- ASP50L Adhesive-Side Powder (light), 50g
- 1- ASP10 EZFLO Super Concentrate, 6 oz. (198ml)
- 1- TRA20 Adhesive Tape Release Agent, 1 oz. (29ml)
- 1- KCP300 Bottle with Cap, 6 oz. (198ml)
- 2- 118L Regular Powder Brushes
- 2- KCP139 Plastic Tweezers
- 1- KCP301 Rinse Basin/Kit Case
- 2- KCP302 Mixing Bowl with Lid
- 2- SF00771 Disposable Latex Glove Pairs
- 1- KCP303 Measuring Spoon, 1 tsp. (5ml)
- 1- Technical Instructions
- 1- ASP501 Texturized, Molded-Plastic Carrying Case; Dimensions: 17.5" x 10.125" x 8.875"; Weight: 6.35 lbs. (2.9kg)



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