

IOWA STATE UNIVERSITY

CSAFE

CENTER FOR STATISTICS AND APPLICATIONS IN FORENSIC  
EVIDENCE

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## Paper Powder Print/Vinyl Print: Procedure

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# 1 Introduction

\*\*\*Turn on the lamination machine and allow it to warm up for at least 10-15 min.\*\*\*

1. On a hard surface, pull up a chair. Near by, have a fume hood containing black finger print powder, a cloth, a finger print brush, and a large plastic container (Figure 1). Have an air compressor with a long hose nearby.



Figure 1: Items needed to powder and print.

2. Have the subject sit on the chair, remove a shoe, and loosen the laces.
3. Over a trash can, tap the shoe lightly to remove any loose dirt or grass. Some pebbles/dirt that is lodged in the tred is OK and could be a distinguishing characteristic.
- Under the fume hood and over the plastic container, brush the shoe with print powder. Dip the tip of the brush in the powder and tap the excess off on the side. Carefully, coat the entire shoe out sole in the powder being sure to include all indents, gashes, and grooves (Figure 2).



Figure 2: Completely coat the shoe in powder.

4. Once the shoe is coated, take the hose of the air compressor and blow off any extra powder. Keep the shoe under the hood while doing this to contain off blowing powder. Be sure to hold the tip a fair distance from the shoe to make sure that all of the powder isn't removed (Figure 3).



Figure 3: Remove any excess powder.

5. Return the shoe to the subject and have them put it on. Be sure that nobody touches the sole of the shoe or brushes off any of the powder.
6. At this point, the tech. should put on a pair of disposable gloves. On the ground, place 4 pieces of long printer paper lengthwise, one in front of the other. After the paper, place a piece of the vinyl flooring on the floor (Figure 4).

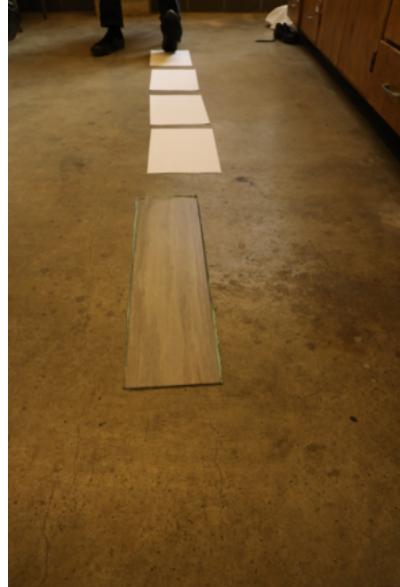


Figure 4: Path set up.

7. Guide the subjects shoe down onto the paper. The subject should place their heel on the corner of the paper with their toe pointing towards the ceiling. They will then roll their foot into a flat standing position and step up so that all of their weight is on the paper.
8. Have the subject shift their weight in the shoe in order to capture all detail possible.
9. Carefully, have the subject step off of the paper. Peel the foot forward until only the tip of the toe is making contact with the paper. At this point, step straight off, but do not place the powdered shoe on the ground (Figure 5).

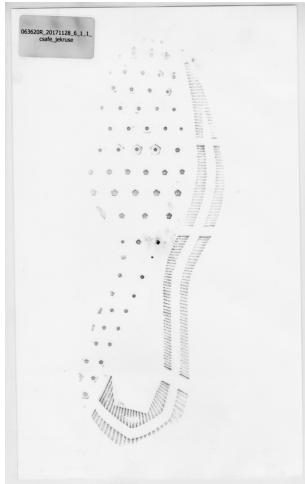


Figure 5: Completed image 1

10. On the second paper, Position the foot in the same way, but take a step as if walking normally. Again, do not place the powdered shoe on the ground after the print has been taken (Figure 6).

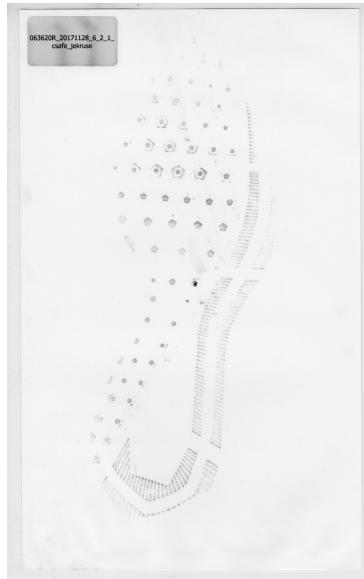


Figure 6: Completed image 2

12. On the third paper, have the subject stamp their foot straight down.

Make sure that the foot is completely captured on the paper and that no part is missing. Lift the shoe straight into the air (Figure 7), but do not place the powdered shoe on the ground (Figure 8).



Figure 7: Taking the third print



Figure 8: Completed image 3

13. On the fourth paper, have the subject step and slightly twist, to smudge the print. Then step straight off, but do not place the powdered shoe on the ground (Figure 9)

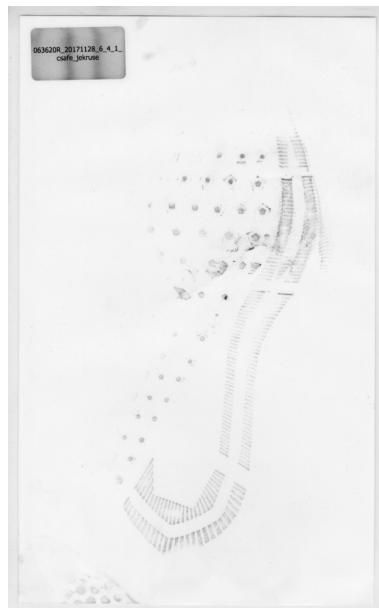


Figure 9: Completed image 4

14. Lastly, have the subject walk across the vinyl flooring in the same way that they did for the second sheet of paper.

15. Please see the naming key on the back of the manual cover for full naming criteria. Use the naming tool created by IT to generate the name. Copy and paste that name into the label maker. Behind the subjects name, add an underscore and put the techs name. If this is the same person, put the name twice. Then press print, and place the label in an upper corner not occupied by the print. With a dry erase marker, label the bottom of the vinyl flooring using the vinyl flooring name from the key.

16. Carefully open the laminate pouch and place the print in with the sticker/tip of the shoe toward the crease, making sure to not smudge or damage the print. Place the print in the laminate machine crease down and allow it to feed through, making sure that it stays straight.

17. Place the scans in the correct files for later scanning. Place the vinyl flooring aside for later photos.

Note: For paper print scanning Please refer to the bed scanner procedure. For flooring photos, refer to the Vinyl photo Procedure.