

# SWGTHREAD

## *Guide for the Collection of Footwear and Tire Impressions in the Field*

### 1. Scope

- 1.1 This Guide provides procedures for the collection of footwear and tire impressions in the field.
- 1.2 The particular procedures and methods employed in a given case will depend on the nature and quality of the impressions.
- 1.3 This Guide may not cover all aspects of unusual or uncommon conditions.
- 1.4 This Guide does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this Guide to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.
- 1.5 This Guide is not intended as a substitute for training in the recovery of forensic footwear and tire track evidence. Completion of a training program and experience in these skills are essential to understanding and applying the principles outlined in this Guide.

### 2. Terminology

*Adhesive lifter*: any adhesive coated material or tape used to lift impressions

*Cast*: the result of the filling of a three-dimensional impression with an appropriate material

*Casting material*: dental stone, sulfur, or other suitable materials specifically used for and generally accepted to accurately reproduce impressions

*Dry origin impression*: formed under dry conditions such as dry dust and dry residue impressions

*Electrostatic lifting device*: an instrument that utilizes electrostatic charges as a means of transferring dry origin impressions from a surface to a film

*Gelatin lifter*: gelatin laid on a pliable backing that can be used to lift impressions

*Impression*: the product of direct physical contact of an item resulting in the transfer and retention of characteristics of that item

*Wet origin impression*: formed under wet conditions, including impressions deposited by residues of blood, grease, mud, and other wet substances

### 3. Significance and Use

3.1 The procedures outlined here are grounded in the generally accepted body of knowledge and experience for the collection of footwear and tire impression evidence. By following these procedures, both patent and latent impressions can be collected.

3.2 Footwear and tire tread impressions are collected in the field for examination purposes.

### 4. Interferences

4.1 Footwear and tire evidence may have inherent limitations that can interfere with the procedures in this Guide. Limitations, when known, should be noted and recorded.

4.2 Limitations can be due to environmental factors, substrate features, and the quality of original impressions.

### 5. Equipment and Requirements

5.1 Electrostatic lifting device

5.2 Casting and lifting materials

5.3 Materials for physical and chemical enhancement

5.4 Photographic equipment

5.5 Scales and tape measures

5.6 Sufficient time for proper collection of evidence

## 6. Procedures

The following procedures may be used, as appropriate, depending on the composition of the impression evidence and the substrate material. The order of the following collection methods may vary from scene to scene.

6.1 Document and/or photograph (as set forth in the Guide for the Forensic Documentation and Photography of Footwear and Tire Impressions at the Crime Scene) impressions prior to and after any procedure.

6.2 Recover items bearing impression evidence when possible.

6.3 Collect impressions.

6.3.1 Three-dimensional impressions in soil, sand, and snow

6.3.1.1 Cast impressions using accepted methods and materials.

6.3.2 Two-dimensional impressions

6.3.2.1 Collect dry origin impressions using electrostatic lifting device, gelatin, or adhesive lifters.

6.3.2.2 Collect wet origin impressions using lifting techniques and/or chemical/physical enhancement techniques, as appropriate.

**Note:** Consideration should be given to field processing of articles and impressions which may be unintentionally damaged during packaging and transportation.

6.4 Collect elimination impressions and/or photographs of footwear and tires of nonsuspect persons and vehicles.

6.4.1 Document brand, manufacturer, size, and DOT information of tires.

6.4.2 Document brand of footwear.

## 7. Report

7.1 Procedures utilized and impressions collected should be documented and may also appear in a report.

## 8. Bibliography

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