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Bio-Foam® Impression Kit

TECHNICAL NOTES

Background

On occasion, it is necessary to obtain an exemplar of a known shoe from a suspect. While some options include inking and rolling the shoe, similar to taking a rolled impression of a fingerprint, BIO-FOAM® Impression Foam offers a method of obtaining a three-dimensional exemplar of the known footwear (see photograph to the right).



Using the BIO-FOAM® Impression Kit is easy, takes only seconds, and does not get the footwear dirty. Each BIO-FOAM® Impression Kit comes in a cardboard container which is suitable for storage and will protect the impression while it is in the evidence storage room. The foam is blue in color and measures 14" x 6" x 2 1/4".

Application

Press the footwear into the BIO-FOAM® Impression material about 1-2 inches. Gently remove the shoe. Liberally coat the BIO-FOAM® Impression with hair spray. Wait until the hair spray dries and prepare a quantity of dental stone (see next paragraph). Pour in the casting powder and allow it to cure. Remove the cast from the BIO-FOAM® Impression and allow it to dry for about 48 hours. Once the cast is completely dried, rinse it with running water and gently scrub it with a bottle brush to remove any excess foam. When the mixture approaches the consistency of thin pancake batter it is ready and should be poured before it becomes thicker. Pour the mixture into the foam by pouring it onto a flat stick or



spoon held close to the surface of the foam. The mixture must be allowed to BIO-FOAM® Impression Kit flow evenly over the impression. In approximately 30 minutes, the cast may be checked. Once the cast is firm, carefully remove it from the BIO-FOAM® Impression material. The cast should be allowed to air dry for 48 hours.

The cast should never be placed in an airtight container or wrapped in plastic. Paper bags can be used but they do not afford the best protection. The bag can easily tear and the cast can fall out or otherwise be damaged. Dried casts should be stored in cardboard boxes. Cast boxes are available with the dimensions of 17 1/4" x 11" x 2 1/4". They are sold in quantities of 25.

Photography

The camera used should be placed on a tripod, which will allow the film plane to be parallel with the surface containing the evidence impression. Some impression evidence examiners prefer black and white photographs over color photographs, as they feel the range of grays with black and white film shows the details better than color films. Illumination of the impression should be done at an oblique angle from a number of directions. In other words, hold the strobe at an oblique angle to the left of the print and take a picture. Take additional exposures with the strobe held at an oblique angle to the right, to the top and to the bottom of the impressions. If added details can be seen by holding the light in other directions, take additional pictures.

With photography of this nature, scales should be included in the photograph. The Bureau photomacrographic scale set was designed by the Federal Bureau of Investigation for this particular purpose. The "L" shaped scale and straight scale are white with black marks on one side and black with white marks on the other. Choose the side that will show the best contrast with the surface and place it close to, but not overlapping, the evidence impression. A larger, 3-Part, folding scale which is handy for tire track impressions is also available. The advantage of an "L" shaped scale is that if the scale divisions on each leg of the scale are not equal in the photograph or if the circles with crosshairs are not absolutely round, you will know that the camera was not parallel to the impression. If the angle of error is not severe, it can be corrected in the darkroom. Tilt the paper carrier to bring the "L" shaped scale back to parallel perspective.

Additional Reading

Footwear Impression Evidence: Detection, Recovery and Examination, 2ND edition

by William J. Bodziak

Techniques of Crime Scene Investigation, 6TH Edition by Barry A. J. Fisher

Ordering Information

Catalog No. 4-1120 BIO-FOAM® Impression Kit, one each
Catalog No. 4-1122 BIO-FOAM® Impression Kit, attached pair
Catalog No. 4-1100 Casting Powder, one gallon
Catalog No. 4-1101 Casting Powder, 25 pounds
Catalog No. 4-1103..... Crime-Cast™
Catalog No. TRXT-KIT..... Traxtone® Green Casting Kit
Catalog No. TRXTB-KIT... Traxtone® Buff Casting Kit
Catalog No. 3-3015 Footprint/Dustprint Boxes, 25 boxes
Catalog No. 6-3880 Bureau Scale, set of 2
Catalog No. 6-3835 3- Part Folding Scale, inches

Catalog No. 6-3830 3-Part Folding Scale, metric
Catalog No. 8-5038 BODZIAK/*Footwear Impression Evidence, 2ND edition*
Catalog No. 8-5016 FISHER/*Techniques of Crime Scene Investigation, 6TH edition*