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Shoe/Tire Exam Kits

TECHNICAL NOTES

Background

The task of making standards of shoe outsoles and vehicle tires has always presented itself as a problem for the laboratory examiner. Various products and techniques exist on the market to assist the examiner in the taking of the standards. Most techniques will provide a 2-dimensional replication of the tread pattern of the shoe or tire but few products or techniques will provide a 3-dimensional replication.

Recent advances in POLYMERS has provided the forensics community with a new product that is able to record minute details of accidental marks and traces on the outsoles of shoes and the tread pattern of automobile tires. Bubber is designed to assist the examiner in the capture of 3-dimensional recordings of shoe outsoles and tire tread designs. Bubber is a moldable, reusable, non-toxic substance that captures the minute details needed for examination.

Safety

Bubber is safe to use and will not harm the examiner nor the environment. Bubber is a dry polymer and will not adhere to surfaces.

Equipment

The Shoe and Tire Exam kits featuring Bubber are all inclusive kits. Both styles of kits are supplied with a working box to retain the Bubber during the capture and recording stages of the examination process.

The Shoe Exam kit is supplied with one floor panel and 4 locking wall pieces as well as one bag of Bubber. The four walls lock to the floor and each other to retain the Bubber.

The Tire Exam kit is supplied with four floor panels and eight wall pieces. The floor pieces are locked together in a succession to form a trough. The wall pieces are set as the side walls to the trough. This allows the tire to be rolled down the length of the trough to capture up to five feet of tire tread. The Tire Exam kit is supplied with two bags of Bubber.

Method

After assembling the floor panel and wall pieces, a portion of the Bubber is removed from the bag (about 1/3 of the bag is sufficient for shoe impressions). The Bubber should be kneaded to make remove any air pockets or fissures in the ball of product. The Bubber is then spread across the bottom of the box using the heel of the hand to move the Bubber around. Heavy pressure is not needed to move Bubber; a light touch will work best. The working thickness will depend on the type of outsole being captured; generally about ½ to ¾ of an inch is sufficient.

After the Bubber is spread over the surface a clean ink roller or rolling pin of some sort can be used to smooth the top surface to remove any dips or valleys.

After the surface is set to satisfaction, then place the box on the floor and step, or walk onto the Bubber. Do not hesitate; make it a smooth flowing motion. By doing so, all of the outsole pattern and marks will be captured.

When capturing tire tread marks the same technique is used to prepare the Bubber. But this time you will use almost all of both bags of Bubber. Once prepared, drive the tire through the trough without stopping. Make sure that the distance between the front and a rear tire is sufficient so that the rear tire does not roll over the front tire mark.

Examination

Examination of the resulting is conducted like any other capture medium; visual examination then photography.

Shoe or tire marks set in Bubber can captured with Traxtone or other dental stones. When casting in Bubber, the cast will need to set for about 24 hours before lifting. This will allow for the complete absorbance of the water shed from the cast. Once the cast is dry, it can be lifted from the Bubber. Scrap off the excess Bubber from the face of the cast and mix back in the left over Bubber. Remove the remaining Bubber with a soft brush and running water.

Photography

Impressions made in Bubber should be photographed using standard impression evidence photography techniques. If the side walls of the box impede the flash angle they can be removed.

Helpful Hints

Bubber is reusable. If an impression is made and is not to the examiner's liking, the Bubber can be remixed and the process repeated until a suitable impression is captured. Bubber will not dry out and needs no special handling for it to retain it impression recording abilities. Bubber can be used until such a time comes that it becomes discolored or has a sufficient amount of debris in the mix that a clean impression cannot be made.

Ordering Information

Catalog No. 4-1110 (1090004) Bag of Bubber
Catalog No. 4-1111 (1013572) Shoe Exam Kit
Catalog No. 4-1112 (1013567) Tire Exam Kit
Catalog No. TRXT-KIT (1008075) Traxtone Casting Kit