

High Resolution Mark Replicator

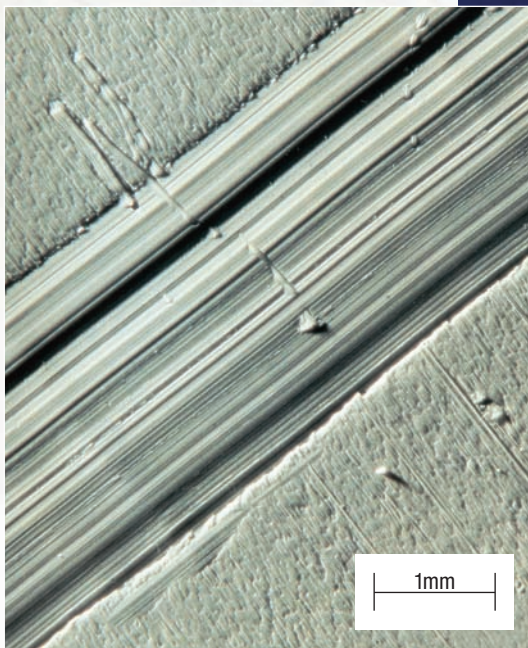


 **isomark**™
*adding a new dimension
to forensic science*



The recovery of a wide range of marks and features as forensic evidence has been made easier with a new fast curing silicone casting material.

Isomark has been formulated specifically for forensic applications, including comparator microscopy. It is especially efficient at separating marks from awkward backgrounds and exhibits high contrast characteristics during microscopic examination.



Benefits

- Easy to apply/accurate delivery
- Automatic mixing of materials
- Easy to use applicator gun
- Mixing nozzle design ensures air-free mix
- No mess
- Mark replicas can be taken from horizontal, vertical and overhead surfaces
- Easily retracted from the mark
- High strength material enables recovery from deep, fine marks

The Forensic Science Service (FSS), has used Isomark to replicate various marks as forensic evidence from crime scenes, in a number of pilot projects with police forces.

Isomark™ compounds are ideal for:

- Recovering toolmark detail
- Casting vehicle chassis numbers
- Recovering fine striation details
- Recovering very small marks
- Use at scenes of crime and in laboratories

Application is easy using the 'gun'. Covering the mark with the compound creates a cast or replica of the mark, which can then be sent to the forensic laboratory for examination.

Replication of chassis number using Isomark T1 Grey



Magnified images of Isomark replica showing unique detail associated with the stamping tool



Case One

A bungalow was attacked, entry was gained and an alarm activated. Toolmarks were left on the doorframe (UPVC) and metal lock. Two people were detained nearby in a car and on the back seat of the car was a screwdriver.

A brown handled screwdriver and a section of the doorframe were submitted to the FSS.

On the piece of UPVC doorframe were a number of overlapping impressed marks and some scratches. The rounded shaft of a tool had made one mark. In this mark were a number of impressed microscopic triangular and irregular shaped marks. The screwdriver that had been submitted had a rounded shaft and in one area had a number of small triangular marks that had been made by a gripping tool or vice.

Test marks were made with the screwdriver in wax and cast using ISOMARK. The mark on the doorframe was also cast with ISOMARK. A microscopic comparison of the detail in these marks showed excellent agreement in the impressed detail.

The degree of match was such for the forensic scientist to conclude that the screwdriver had undoubtedly made the impressed mark on the doorframe.

Case Two

A vehicle was broken into, the passenger window had been smashed, and an implement had been forced into the drivers door lock and the boot lock. Items from the car had been stolen.

Two suspects were found nearby in possession of all the stolen property. One suspect had a screwdriver on him; they both denied breaking into the vehicle and pleaded not guilty at court.

A black handled screwdriver, a lock from the driver's door of the vehicle and lock from the boot of vehicle, were submitted to the FSS.

ISOMARK casts were taken from the keyway of both locks. ISOMARK has an advantage over other casting material in that it is easy to remove from recessed areas or deep marks. There were scratches and impressed detail present.

The marks from the locks were compared with test marks made using the screwdriver. A small impressed mark in the lock from the driver's door showed excellent correspondence with a corner of the screwdriver.

Forensic examination showed that an impressed mark within the keyway of the driver's door lock had undoubtedly been made by the blade of the screwdriver having been levered forcefully within the lock.

Case Three

Two suspects were arrested on suspicion that their premises were being used to produce counterfeit credit cards.

A large number of items were submitted to the FSS in this case, but essentially the requested examination was to look at a number of credit cards and determine whether or not an embossing machine taken from the premises had been used in their manufacture.

ISOMARK casts were made of the embossed number and letters on the suspected counterfeit cards. Blank cards were used in the embossing machine to reproduce the numbers and letters of interest. These were also cast using ISOMARK. The very fine detail in the embossed characters and on the surface of the cards was replicated exactly in the ISOMARK casts.

The forensic examination showed that the embossing machine had undoubtedly been used to emboss the detail on the fake credit/debit cards examined.

ISOMARK GRADES

| ISOMARK GRADE | THIXO/ FLUID | WORKING LIFE 25°C (MINS.) | CURE 25°C (MINS.) | KEY FEATURES |
|---------------|--------------|---------------------------|-------------------|--|
| T-1 Grey | Thixotropic | 1 | 7 | General purpose thixotropic material. Use for fast cure, accurate mouldings, from horizontal, vertical and overhead locations. |
| T-2 Grey | Thixotropic | 5 | 20 | Slower curing version of T-1 Grey for use in warm conditions, where an extended working life may be required. |
| F-1 Grey | Fluid | 1 | 7 | General purpose, fast curing, fluid material. Pourable consistency reduces air bubble entrapment on very rough surfaces. Use on horizontal surfaces only or with retaining moulds. |

Health and Safety

Isomark Grey materials present no significant risk to health, are non-flammable and solvent free, and cleared for all normal methods of transport including air transport.

Ordering Information

Initial requirements: Dispensing gun

Cartridge of Isomark compound
(specify grade required)

Nozzle Pack (10 nozzles)

All the above items are sold separately. Dispensing guns are fully reusable. Additional cartridges and nozzles can be purchased as required. Once opened, a cartridge can easily be re-sealed simply by leaving the used nozzle in place on the cartridge. To re-use the cartridge it will be necessary to fit a new nozzle

(Please note: Larger systems are available if required)



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