



TECHNICAL BRIEF

TAKING BACK TOMORROW: TOWARDS FEWER STOLEN VEHICLES (SANS 534-1)

For Immediate Release

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- Rosslyn, Pretoria

Background: A New Ingredient in the Antidote Against Vehicle Crimes

Each year, more than 90 000 motor vehicles worth more than R9-billion are stolen or hijacked in South Africa. As anyone who has ever had a car stolen soon learns, present methods of recovering vehicles are not very efficient: only 43% of stolen or hijacked cars are recovered. And then, even if recovered, the car may be unidentifiable and never returned to its owner or so damaged that it cannot be used.

While several methods of marking cars with secret identifiers are currently used, none are foolproof. Usually, criminals learn to identify and neutralise any such new device within two years.

That is why a new identifier technology that is virtually impossible for criminals to neutralise is important news: as is the standard, SANS 534-1. Microdots, smaller than the size of a printed full-stop and used for decades by spies to send information secretly and securely, are now being used to identify vehicles in South Africa.

Basically, about 10 000 microdots are applied to some 88 different locations in a vehicle. These microdots then pose a huge problem for criminals, as the discovery of one microdot leads to the identification of the vehicle's correct engine number or vehicle pin within seconds. Discovering and removing all 10 000 microdots in the 88 different locations is practically impossible.

International statistics indicate that Microdot technology leads to a decrease of between 50% and 60% in the number of stolen and hijacked vehicles, and to an improvement of more than 55% in recoveries.

Although the main function of microdot technology is to improve the ability to identify vehicles or even major components sold as used spares, statistics indicate that it is a deterrent for hijackings and motor vehicle theft, as well.

Fouche Burgers, Project Manager from Business Against Crime South Africa with a focus on vehicle crimes, has played a key role in writing the newly released Standard.



Burgers answers the following questions related to the Standard:

1. Why was the Standard Written?

Each year, it is estimated that 90 000 motor vehicles worth more than R9-billion are stolen or hijacked. Of these vehicles, only 43% are recovered. Of these recovered motor vehicles, between 12,000 and 16,000 (worth more than R1-billion) cannot be identified and as a result of this are crushed by the SAPS.

“The key challenge facing law enforcement remains the need to improve the identification of motor vehicles. Investigations have proved that in almost all serious vehicle-related crimes and in many road traffic offences, primary and secondary identifiers (i.e., the licence number, the Vehicle Identification Number (VIN), engine number and covert identifiers) have been altered or removed in order to conceal the crime and identity of a vehicle.”

“The high percentage of unrecovered, stolen and hijacked vehicles and the high percentage of unidentified recovered vehicles (unidentified by police and by staff of the Original Equipment Manufacturers (OEMs)), prove the inadequacy of the current vehicle identification methods.”

“Improving the identification of motor vehicles has been a priority of Business Against Crime South Africa and its partners. Many alternatives have been assessed. The most significant and promising alternatives were the marking of the vehicle in multiple places (multiple parts marking or 'whole of vehicle marking') by means of laser etching or by using barcode labels. However, most of these alternatives were seen as expensive, impractical, inaccessible and ineffective. In addition, there were concerns that the fitment could damage the motor vehicles. History in South Africa has proved that criminals only need a short period of time (less than 2 years) to acquire the necessary knowledge to be able to remove all covert markings (especially barcode labels).”

“During the assessments done by Business Against Crime South Africa, Microdot technology has emerged as being head and shoulders above the rest in securing and preserving the identity of a vehicle.”

2. What is the Basic Principle behind the Microdot Technology?

“Microdot technology entails the application (fitment) of 10,000 (or a number determined by the manufacturer in the event of OEM fitment) small polyester or metal dots, laser-etched with multiple lines of the Vehicle Identification Number (VIN) (for new vehicles) or a Personal Identification Number (PIN) (for used vehicles), in at least 88 different positions (or a number determined by the manufacturer in event of OEM fitment).

“Microdots are mainly used as a forensic tool by police services to identify a vehicle. The investigation process followed by the police to determine the identity of a vehicle or a part thereof does not differ from the process followed when using the current VIN, Engine number or covert markings.”



“A motor vehicle and its parts can be marked with microdots indicating a different unique identification number other than the VIN number (i.e. a vehicle can be microdotted more than once). Microdots do not replace the need for other security measurers (e.g. vehicle tracking, locks, alarm systems and immobiliser systems) but are seen as a critical addition in securing the identity of motor vehicles.

3. What Does the Standard Cover in Terms of Compliance Requirements?

“SANS 534-1 (in full: *Vehicle Security-Whole of Vehicle Marking Part 1: Microdot Systems*), describes the characteristics and methods of application of unique identification carriers, called microdots, to vehicles as well as the processes required to ensure the integrity, authenticity and confidentiality of the entire microdot production, supply, storage and application system. The standard defines the minimum performance requirements of the adhesive used to affix the microdots to vehicles and prescribes requirements for the after-market installation of microdots on vehicles, including surface preparation.

“In addition, the Standard makes recommendations regarding the security of the information systems or databases that link information regarding the vehicle to the microdot data.

“The purpose of microdot application as defined in this Standard is limited to the unique identification of vehicles and their parts as required for law enforcement and judicial processes. The authenticity of vehicles may be verified by means of microdots combined with other vehicle identifiers and face value documents. Secondary uses of microdots would include fraud control by vehicle manufacturers, insurance companies, fleet owners and rental companies.

4. Who Would Need to Purchase or Use the Standard?

“While the Standard would be essential reading for all importers of microdots and microdot fitment centres, all organisations involved with vehicle security (such as insurance, law enforcement agencies, and the importers, manufacturers and distributors of vehicles) would also need a sound working knowledge of the Standard. In future, this Standard will form part of the annual Government RT57 tender requirement with regards to the purchase of motor vehicles.

5. Is this Technology Already Being Used / Has it Already Been Used?

“As of 31 May 2009, the technology has been applied to over 370,000 motor vehicles in South Africa. This is mainly due to the leadership shown by manufacturers and companies who have adopted the technology as an important aspect within their manufacturing process or have ensured that it is fitted to their vehicles prior to delivery. These companies and organisations are:

- Nissan SA
- BMW SA
- AVIS Rent-a-Car
- Toyota SA (with the Quantum minibus)
- SAPS (the South African Police Service)
- SAVRALA (the South African Vehicle Rental and Leasing Association) and



- VESA.

“The leading roles that Nissan SA and BMW SA are playing in the fight against crime must not be underestimated. The effect of their decision to mark all their vehicles with microdots, even in difficult economic times, will benefit the country for many years. What we hope to see, however, is a much fuller take up of this technology by the vehicle manufacturing, leasing, rental and insurance industries, among others, as the technology has been shown to be an effective in identifying and recovering vehicles and their parts and closing down the market for stolen vehicles and parts”, says Burgers.

“Now that the Standard has been launched, we urge consumers to ensure that the fitment of microdots on their vehicles are applied in line with the compliance requirements of the Standard to derive the full benefit of this technology”, says Burgers.

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1. For Information on the Standard and its benefit related to the fight against crime:

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2. To purchase the Standard:

Standards Sales at the SABS

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Email: sales@sabs.co.za

The Standard can also be downloaded directly from the SABS secure standards webstore:

(http://www.sabs.co.za/Business_Units/Standards_SA/WebStore/WebStoreHome.aspx) on entry of a credit card number.

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3. For additional information on fitment:

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