

Q – Class

INSTALLATION INSPECTION AND TESTING OF NON-CATEGORISED VEHICLE SECURITY SYSTEMS

***THE BRITISH INSURANCE INDUSTRY'S VEHICLE
SECURITY SCHEME***

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THATCHAM
***THE MOTOR INSURANCE
REPAIR RESEARCH CENTRE***

ISSUE 1 – August 2001

**NON – CATEGORISED
VEHICLE SECURITY SYSTEMS**

Report & Summary – EVQ 460

Signed By:



Date: 19.02.02

Concurred By:



Date:

19-02-02.

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INTRODUCTION

Thatcham has tested the following system as a “non-categorised” system. As such, it is not given a pass/fail rating, but is tested in accordance with a programme agreed between Thatcham and the manufacturer, with the aim of measuring the system performance and reporting on it. Test reports may help to generate further interest and confidence in a product.

The test procedures have been chosen to provide base standard reproducible test and attack criteria derived from internationally accepted standards and procedures where applicable.

Test and attack criteria stated in this document are subject to change, due to either vehicle specific applications that may restrict or require expansions of the test methods, or due to adaptations of theft methods employed in the field by criminals.

Datadot Technology Limited

Evaluation Number: EVQ 460

Date of Submission: 24 July 2001

Summary Report:

Datadot Technology Limited submitted the following products for assessment under the "Q" class (Non-Categorised) Test Regime:

- DataDot / Mighty Dot Worldwide system

The product was assessed under the following criteria:

- Endurance Conditioning
- Installation Inspection
- Field Trials
- Verification of Identity
- Vehicle Identification Searches
- Data Storage
- Police Liaison

Conclusion

The Datadot Technology Limited DataDot / Mighty Dot Worldwide system

- Performed as claimed by Datadot Technology Limited
- Demonstrated loss reduction potential for automotive application
- Was reliable and durable in an automotive environment

Datadot Technology Limited

Evaluation Number: EVQ 460

Date of Submission: 24 July 2001

Company Profile

Datadot Technology Limited is an Australian incorporated holding company with subsidiaries in Australia (Datadot Technology Australia Pty Ltd) and the USA (Datadot Technology USA Inc. Datadot Technology Manufacturing Inc). The company's main production facility is based in the USA.

Product Range:

- DataDot / Mighty Dot Worldwide system
- Microthread
- "DNA" Marker

Product Submitted for Assessment:

- DataDot / Mighty Dot for Vehicles

Product Description

The Mighty Dot is a microdot encoded with either a Part Identification Code (PIN) or Vehicle Identification Number (VIN). The microdots are suspended in adhesive and sprayed onto vehicles.

- The product can be applied to all component parts of vehicles.
- The adhesive fluoresces when exposed to ultraviolet light

Function

Mighty Dot is used to mark vehicles in both overt and covert locations.

Data Base

Where PIN numbers are used the data is recorded with the International Security Register (ISR).

Test Criteria

Introduction

This criteria has been agreed between Datadot Technology Limited and Thatcham for the purpose of testing the following product:

- Datadot / Mighty Dot Worldwide

To demonstrate that the products:

- Perform as claimed by Datadot Technology Limited
- Demonstrates loss reduction potential for Automotive applications
- Are reliable and durable in an Automotive environment

General Requirements

Where microdots are designed to be fitted to vehicles for the purpose of identifying the vehicle and/or marking component parts of the same.

The manufacturer/supplier shall provide evidence that the microdots are fit for use in an automotive environment and shall not be removable by a third party such that the vehicles identity cannot be established.

The operating procedures of any related Data Storage facility or registration scheme shall be examined and evaluated as required.

The products shall be subject to evaluation and performance testing to the requirements of the British Insurance Industry's Criteria for Vehicle Security. The Test Specifications for Alarms / Immobilisers (Issue 2) as appropriate. And the following Test Programme

- Endurance Conditioning
- On Vehicle Test Programme
- Operating Procedures

General

Whilst every effort has been made to make this criteria as comprehensive as possible Thatcham cannot guarantee the lifetime performance or efficiency of this product.

Test Programme

Test Samples

Datadot Technology Limited provided samples of the following material sprayed Mighty Dot suspended in:

- i) water based adhesive
- ii) Solvent based adhesive.

Water Based Adhesive

Sample No.	Material
# 1 to # 6	Plastic Trim
# 7 to #12	Alloy Plate (Road wheel simulation)
#13 to #18	Steel sheet coated in car paint
#19 to #24	Steel Plate (Road wheel simulation)
# 1 to # 6	Alloy Plate (Road wheel simulation)
# 7 to #12	Steel sheet coated in car paint
#13 to #18	Steel Plate (Road wheel simulation)

Solvent Based Adhesive

Sample No.	Material
#1 to #6	Plastic Trim
#7 to #12	Alloy Plate (Road wheel simulation)
#13 to #18	Steel sheet coated in car paint
#19 to #24	Steel Plate (Road wheel simulation)
#1 to #6	Alloy Plate (Road wheel simulation)
#7 to #12	Steel sheet coated in car paint
#13 to #18	Steel Plate (Road wheel simulation)

Endurance Conditioning.

The following samples, plus a viewing device, were sent to SGS for endurance conditioning in accordance with the requirements of the Test Criteria The British Insurance Industry's Criteria For Vehicle Security. (See table 1)

Samples

Solvent Based Adhesive	Water Based Adhesive
# 1 to # 4	# 1 to # 4
# 7 to #10	# 7 to #10
#13 to #16	#13 to #16
	#19 to #22

Table 1

Clause	Test	Standard
12.1.1	16 Hour Dry Heat	IEC 68-2-2 (1974)
12.1.2	16 Hour Cold	IEC 68-2-1 (1990)
12.1.3	Temperature & Humidity	IEC 68-2-38 (1974)
12.2.1	7 day Salt Mist Spray	IEC 68-2-11 (1981)

On completion of the test regime, the samples were examined to verify that the microdots were both legible and identifiable.

(For further information see SGS test report DUR23341/GH/01)

Attack testing

The following samples, plus a viewing device, were retained by Thatcham and subjected to attack with a variety of common chemicals and solvents that could be reasonably expected to be used on a vehicle in normal usage

Samples

Solvent Based Adhesive	Water Based Adhesive
# 1s to # 4s	# 1w to # 4w
# 7s to #10s	# 7w to #10w
#13s to #16s	#13w to #16w
	#19w to #22w

Chemicals

Vehicle Maintenance	Exterior	Interior
Brake Fluid	Bleach	Upholstery Cleaner
Diesel	Detergent	Trim Polish / Cleaner
Engine Oil	High Pressure Wash	
Petrol	Window Wash Fluid	

Test Schedule

Test	Sample	Water Based Adhesive		
		Chemical	Test Time	
			Soak	Clean
1.	# 5w	Trim Polish/cleaner	120 sec	120 sec
2.	# 5w	Window Wash Fluid	60 sec	60 sec
3.	# 6w	Detergent	120 sec	120 sec
4.	# 6w	Fabric Cleaner	60 sec	60 sec
5.	#11w	Pressure Wash	N/A	60 sec
6.	#12w	Detergent	120 sec	120 sec
7.	#17w	Brake Fluid	60 sec	60 sec
8.	#18w	Pressure Wash	N/A	60 sec
9.	#23w	Engine oil	60 sec	60 sec
10.	#23w	Petrol	60 sec	60 sec
11.	#23w	Diesel	60 sec	60 sec
12.	#23w	Pressure Wash	60 sec	60 sec
13.	#24w	Detergent	120 sec	120 sec
14.	#24w	Bleach	120 sec	120 sec

Solvent Based Adhesive				
Test	Sample	Chemical	Test Time	
			Soak	Clean
1.	# 5s	Pressure Wash	N/A	60 sec
2.	# 6s	Pressure Wash	N/A	60 sec
3.	#11s	Engine oil	60 sec	60 sec
4.	#12s	Pressure Wash	N/A	60 sec
5.	#12s	Brake Fluid	60 sec	60 sec
6.	#12s	Pressure Wash	N/A	60 sec
8.	#17s	Brake Fluid	60 sec	60 sec
9.	#17s	Diesel	60 sec	60 sec
10.	#17s	Petrol	60 sec	60 sec
11.	#18s	Bleach	120 sec	120 sec
12.	#18s	Pressure Wash	N/A	60 sec

On completion of each test microdots were scraped from the sample and examined under the viewing device. In each case the markings are legible and identifiable.

On Vehicle Test Programme

Microdots encoded with the appropriate Vehicle Identity Numbers (VIN) were sprayed on the following test vehicles.

- Mercedes
- Renault Laguna

During the spraying operation no cross car contamination was observed.

Field Trials

Mercedes

After 1000 miles the Mercedes test vehicle was examined for signs of loss or degradation of the microdots.

Using an ultra violet lamp, all treated areas were identified. A sample containing microdots was scraped off the vehicle and the VIN number read and verified. The tests were completed within 10 minutes.

Laguna

After 2500 miles the Laguna test vehicle was examined for signs of loss or degradation of the microdots.

Using an ultra violet lamp, all treated areas were identified. A sample containing microdots was scraped off the vehicle and the VIN number read and verified. The tests were completed within 10 minutes.

Operating Procedures

VIN

Where Mighty Dot is supplied with the VIN number recorded on the microdot, the information contained in the VIN provides sufficient information for positive vehicle identification.

PIN

Where Mighty Dot is supplied with PIN numbers recorded on the microdot, The information contained in the PIN numbers is registered with the International Security Register (ISR)

ISR

The ISR has been independently assessed by the Loss Prevention Council as meeting the requirements of LPS 1224, Requirements for Secure Database Registers.

Security

The identity of all enquirers is verified before an enquiry is processed.
All enquiries are dealt with by established protocols depending on the nature of the call and in accordance with the Data Protection Act 1998.

In the case of UK originated Police enquires, a call is made via the originating Force HQ or relevant Police Station to verify identity of enquirer.

In the case of non-UK originated Police enquires, the return number is verified via the International Directory before responding.

All enquires are recorded and logged.
Police enquires are recorded on Police enquiry forms.

(For more information on the ISR see Thatcham Report EVQ 400)

Conclusion

The Datadot Technology Limited Mighty Dot product was assessed under the following criteria:

- On Vehicle Test Programme
- Operating Procedures
- Endurance Conditioning

On Vehicle Test Programme

The following tests were carried out to a satisfactory conclusion:

- Application of Microdots
- Field Trials
- Verification of Identity (VIN)

Operating Procedures

The following operating procedures were checked and verified satisfactorily:

- Vehicle Identification Searches
- Data Storage
- Police Liaison

Endurance Conditioning

The following tests were carried out on test samples.

- Resistance to common chemicals
- 16 hour dry heat (IEC 68-2-2 [1974])
- 16 hour cold (IEC 68-2-1 [1990])
- Temperature & Humidity (IEC 68-2-38 [1974])
- 7 day salt mist spray

The results of the tests were satisfactory.

The Datadot Technology Limited Mighty Dot:
Performed as claimed by Datadot Technology Limited

- Demonstrated loss reduction potential for automotive application
- Was reliable and durable in an automotive environment