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Laboratory for Ballistic
Research (LBO)
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Test certificate *

The test has been carried out according to **MIL-STD-662F**
class **1,1 gram FSP**

Assignor Lyra (pvt)
L-14, block 22
75950 Karachi
Pakistan

Experiment date 24-05-2007

Project Fabric

Sample identification SAMPLE - 512

Subject
Ballistic experiments

Date
29-05-2007

Reference
07MB03513

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The Standard Conditions for Research
Instructions given to TNO, as filed at
the Registry of the District Court and
the Chamber of Commerce in The
Hague shall apply to all instructions
given to TNO.

For details see page 2 upto page 3.

The sample has been tested with 1.1 g. FSP projectiles and has a ballistic limit velocity (V50) of 501 m/s with a standard deviation (SD) of 10 m/s.

M.J.G. Bakker

Project leader

* This test certificate can not be used as a product certification



Test certificate number 07MB03513
Assignor Lyra (pvt)

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Experiment date 24-05-2007

Test results

Description of testmethod

Determination of the ballistic limit velocity (V50 value) of a sample material. The V50 value is defined as the arithmetic mean of the 2(3) lowest projectile velocities giving complete penetration and of the 2(3) highest velocities giving partial penetration. These velocities should fall within a bracket of 18.3 (27.4) m/s (MIL-STD-662F).

Results

SAMPLE - 512 (07MB03513) : MIL-STD-662F - 1,1 gram FSP - 1.1 g. FSP				
V50 [m/s]			Standaarddeviation [m/s]	
501			10	
Shot number	Impact velocity [m/s]	Stop / Perforation	Valid (Yes/No)	Used
KKW2 07SN04845	547	Perforation	Yes	
KKW2 07SN04846	513	Perforation	Yes	*
KKW2 07SN04847	463	Stopped	Yes	
KKW2 07SN04848	500	Stopped	Yes	*
KKW2 07SN04849	481	Stopped	Yes	
KKW2 07SN04850	508	Perforation	Yes	*
KKW2 07SN04851	484	Stopped	Yes	
KKW2 07SN04852	490	Stopped	Yes	*
KKW2 07SN04853	518	Perforation	Yes	
KKW2 07SN04854	489	Stopped	Yes	*
KKW2 07SN04855	508	Perforation	Yes	*

*: indicates velocity value within bracket and used for determination of the V50 value.

Ballistic limit velocity	:	V50 = 501 m/s
Standard deviation	:	S.d. = 10 m/s

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Test certificate number 07MB03513
Assignor Lyra (pvt)

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Experiment date 24-05-2007

Sample specifications

Assignor identification : SAMPLE - 512
TNO identification : 07MB03513
Reference :
Date of arrival : 11-05-2007
Size : 410 x 410 mm²
Thickness : 8.5 mm
Weight : 985 gram
Areal mass : 5.9 kg/m²
Composition of sample in direction as encountered by
projectile (Specification assignor) : Ballistic Panel
Remarks : None

Test specifications

Experimental facility : Small Calibre Firing Range no. 2 Ypenburg
- temperature : 21 °C
- relative humidity : 46 %

Conditioning of sample material

- duration at least : 12 - - hours
- temperature : 21 - 25 °C
- relative humidity : 45 - 55 %
Remarks : none

Ballistic specifications

Weapon : SVB
- barrel length : 605 mm
- rifling twist : 1 : 10"

Projectile : 1.1 g. FSP
- weight : 1.1 gram
- calibre : 5.38 mm
- manufacturer : Bogner

Distance muzzle to target : 5.8 m

Other specifications

Contract number : 12416
Backing : None

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