

Beschussamt Mellrichstadt

Lohstraße 5, 97638 Mellrichstadt
Tel.: 09776/70500, Fax: 09776/5457

Rofi AS
Eikremsvingen 2C

NO-6422 Molde

Test Report

Determining the ballistic limit V50 according to
STANAG AEP-2920, Edition A Version 2

Date of issue
of the guideline : 9/2016

Requirement : V50 against appendix H.1 - ASSESSMENT OF V50

Report No : 24V002A01#, order No.:00004
Date of delivery : 18.12.2023
Tester : Treuting

Sample : soft armour pattern
Designation : Insert for Rofi Ravelin OB MKII vest

Applicant : Rofi AS
Manufacturer : Rofi AS

Description of the specimen in shooting direction (specification
of the manufacturer):

see appendix 2
sample 1


Bötsch



Mellrichstadt, 03.01.2024

The test results relate only to the tested samples described in
this test report.
This test report is only valid with the official seal and
correspondence of the report numbers on all pages.
Duplication in extracts of this test report is not allowed. It is
permitted to pass on this test report without description of the
specimen.

Beschussamt Mellrichstadt
Lohstraße 5, 97638 Mellrichstadt

Report-No.: 24V002A01#
Report part-No.:
Test date: 20.12.2023

Test specifications and results:

Size of the sample (mm) : 400 x 400
Total weight determined by the Beschussamt (g) : 477

Calibre : 5,385mm
Bullet type : FSP (STANAG 2920, A3/6723/1, Rei, CN191)
Bullet mass : 1,102g
Weapon : Prüflauf Nr. 01/07
Barrel length : 650mm
Twist length : 508mm
Shooting distance : 3,80m
Room temperature : 21°C
Humidity : 34%
Penetration witness : 0.5mm Al-sheet
Sample fixation : clamping frame 400mm x 400mm
Sample preparation : 24 hours at 20+-2°C and 65+-5% humidity

Hit pattern (preset) : BWB-TL8470-0064

| No | veloc. v(2,30) [m/s] | energy E(2,30) [J] | pene- trat. J/N | angle [deg.] 1.) | remarks |
|----|----------------------------|--------------------------|-----------------------|------------------------|---------|
| 1 | 502 | 139 | N | 90,0 | |
| 2 | 516 | 147 | N | 90,0 | |
| 3 | 511 | 144 | J | 90,0 | |
| 4 | 504 | 140 | N | 90,0 | |
| 5 | 493 | 134 | J | 90,0 | |
| 6 | 497 | 136 | J | 90,0 | |
| 7 | 498 | 137 | J | 90,0 | |
| 8 | 503 | 139 | J | 90,0 | |
| 9 | 489 | 132 | N | 90,0 | |
| 10 | 493 | 134 | N | 90,0 | |

1.) 90 degree = 0 degree NATO

The evaluation of penetration or no penetration was carried out according to STANAG AEP-2920

| V50-ballistic limit: | | [m/s] | [fps] | E-50 [J] |
|------------------------|------|-------|--------|----------|
| instrumental velocity: | V = | 500,6 | 1642,0 | 138,1 |
| velocity loss: | VL = | 13,5 | 44,3 | |
| striking velocity: | VS = | 487,1 | 1597,7 | 130,7 |

This report consists of 2 pages and 2 appendix

Abkürzungen / abbreviations

Geschossarten / bullet types:

| | | |
|------|------------------------------|---------------------------|
| L | Blei | Lead |
| FMs | Vollmessing | Full Brass |
| CB | Kegelstumpfgeschoss | Coned Bullet |
| FMJ | Vollmantel | Full Metal Jacket |
| RN | Rundkopf | Round Nose |
| SC | Weichkern | Soft Core |
| HC | Hartkern | Hard Core |
| WC | Wolframcarbidkern | Tungsten Core |
| PB | Spitzkopfgeschoss | Pointed Bullet |
| FN | Flachkopf | Flat Nose |
| FeC | Weicheisenkern | Fe-Core |
| SCP | Weichkern mit Penetrator | Soft Core Penetrator |
| TPSC | Zwei Stahlkerne | Two-piece Steel Core |
| I | Brandsatz | Incendiary |
| JSP | Teilmantelgeschoss | Jacketed Soft Point |
| JHP | Teilmantelhohlsplitzgeschoss | Jacketed Hollow Point |
| SJSP | Teilmantelgeschoss | Semi Jacketed Soft Point |
| SJHP | Teilmantelhohlsplitzgeschoss | Semi Jacketed Hollow Pont |
| SWC | Scharfrandgeschoss | Semiwadcutter |

Bemerkungen / comments:

| | | |
|-------|--|---|
| oM | ohne Merkmal | without marks |
| l | leicht (z.B. leichte Beule ...) | slight (e.g. slight bulge ...) |
| s | stark (z.B. starker Splitterabgang) | serious (e.g. serious fragmentation) |
| BoR | Beule ohne Riss | bulge without cracks |
| BmR | Beule mit Riss | bulge with cracks |
| BmRoL | Beule mit Riss ohne Lichtdurchlass | bulge with cracks without light |
| BmRmL | Beule mit Riss mit Lichtdurchlass | bulge with cracks with light |
| SA | Splitterabgang | fragmentation |
| SF | splitterfrei | no fragmentaion |
| gLD | glatter Durchschuss | complete penetration |
| SpD | Spitzendurchbruch | partial penetration |
| S | Splitterbildung nach DIN EN ² | fragmentation described by DIN EN ² |
| NS | Splitterfrei nach DIN EN ² | no fragmentation described by DIN EN ² |

²DIN EN 1063, DIN EN 1522/1523

Sonstige / miscellaneous:

| | | |
|----|----------------------|-----------------------------|
| J | Ja | yes |
| N | Nein | no |
| SI | Splitterindikator | fragmentation witness plate |
| DI | Durchschussindikator | penetration witness plate |
| TA | Trefferabstand | hit distance |
| FG | Flächengewicht | mass per unit area |
| MH | Multihit | |

Revision, 25.06.2020

Beschussamt Mellrichstadt
Lohstraße 5
D-97638 Mellrichstadt

Report-No.: 24V002A01#
Appendix : 2
Test date : 20.12.2023



Rofi AS
Eikremsvingen 2C
NO-6422 Molde
Norway
Tel. + 47 7120 3333
Email : sales@rofi.com
Enterpr.no : NO 965 454 411 MVA

Rofi
Eikremsvingen 2C
NO-6422 Molde
Norway

Sample 1:

Insert for Rofi Ravelin OB MKII vest for demining in V50 450 m/sec. STANAG 2920

Designation:

Manufactured 28.05.2018.

Detailed description of the sample construction in direction of attack:

Quantity: 1
Nominal thickness:
Type of material: Teijin Twaron CT714 aramid 190 g/m2
Manufacturer: Rofi AS
Mass per unit area: 14 layers CT714 plus PU coated aramid cover
Dimensions:
Size: 40 x 40 cm
Nominal thickness:
Mass per unit area: 0,48 kg
Information about Tailoring: