



# The Test Center of Bulletproof Equipment of China Ordnance Industry

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## Test Report

BFJZ (2008) 264

Name:	<u>Ballistic Composite Material</u>
Type:	<u>RYB 92-09</u>
Client:	<u>Ningbo Rongyi Chemical Fiber Science &amp; Technology Co., Ltd.</u>
Test Aim:	<u>Ballistic Resistance Function</u> <u>NIJ Standard-0101.04</u>
Standard:	<u>Ballistic Resistance of Personal Body Armor</u>
Date:	<u>Nov.25, 2008</u>



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Name:	Ballistic Composite Material
Type:	RYB 92-09
Client:	Ningbo Rongyi Chemical Fiber Science & Technology Co., Ltd.
Manufacturer:	Ningbo Rongyi Chemical Fiber Science & Technology Co., Ltd.
Brand:	Rongyi Science & Technology
Test Date:	Nov.21, 2008

### Test Conclusion

The firing practice test shows that Type RYB92-09 Ballistic Composite Material (sample), provided by Ningbo Rongyi Chemical Fiber Science & Technology Co., Ltd., can effectively prevent the penetration of NATO cartridge fired from 7.62mm M14 Automatic Rifle at the range of 15m. Testing Condition is normal temperature (natural temperature). The maximum deformation depth on the artificial body is 34.0mm. The ballistic resistance function meets level III requirements of NIJ Standard-0101.04 Ballistic Resistance of Personal Body Armor.

The attached chart and pictures No. 1-2 show the details.

Author: *Sun Hongyong*

Censor: *Tian Guiyi*

Approved By: *Peng Yuchun*

## Test Summary of Ballistic Resistance Specification of Type RYB 92-09 Ballistic Composite Material

Temperature :4℃

Humidity :50%

Attached Chart

Ballistic composite material weight		Ballistic composite material protected area		Ballistic composite material		Testing condition	Shooting range (m)	Angle of incidence	Sequence	Muzzle velocity (m/s)	Penetration	Deformation (mm)
		Ballistic insert (m <sup>2</sup> )	Body armor material panel (m <sup>2</sup> )	Ballistic insert ceramic thickness (mm)	Body armor material panel PE (layer)							
Ballistic insert (kg)	Body armor material panel (kg)	Gross weight (kg)	Ballistic insert (m <sup>2</sup> )	Body armor material panel (m <sup>2</sup> )	ceramic thickness (mm)	PE (layer)			1	831	pp	25.0
2.24	0.93	3.17	0.075	0.16	7.0	10.6	38	0°	2	831	pp	20.3
									3	827	pp	29.0
									4	843	pp	27.3
									5	834	pp	27.5
									6	832	pp	34.0

- Remarks
1. The test conclusion only reacted to the sample.
  2. Weapon in testing : 7.62mm M14 Automatic Rifle.
  3. Ammunition in testing : NATO cartridge.
  4. Keep ammunition at temperature 20±2℃ for 2h before test.
  5. Determination of the muzzle velocity with B215/B470 Ballistic Analytic System.

Shooter:Wang Wen

Operator:Song Qingqing

Measure: Tian Guiyi

Recorder: Song Qingqing



Figure 1

Shot marks of Type RYB92-09 Ballistic Composite Material from the front attack



Figure 2

Deformation shape on the artificial body