

INCH-POUND

MIL-C-46931F(AR)  
 AMENDMENT 3  
11 August 1999  
 SUPERSEDING  
 AMENDMENT 2  
 26 November 1997

## MILITARY SPECIFICATION

CARTRIDGE, 7.62MM, NATO, BALL M80

MIL-C-46931F was inactivated after 6 February 1996 For New Design.

This amendment forms a part of MIL-C-46931F(AR), dated 29 March 1991, and is approved for use by the US Army Armament, Research, Development and Engineering Center, and is available for use by all Departments and Agencies of the Department of Defense.

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3.7.1 Add the following to the end of paragraph 3.7.1:

"If velocity is measured using the EPVAT System, the chamber pressure measurement must be performed using the EPVAT System as well."

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3.7.1.5: Delete in its entirety.

3.7.1.6: Delete in its entirety.

3.7.1.7: Delete in its entirety.

Add new paragraphs 3.7.2, 3.7.2.1, 3.7.2.2 as follows:

"3.7.2 Velocity. The velocity test may be performed using a velocity test barrel or the EPVAT method. The test method employed shall be recorded on the test results.

3.7.2.1 Velocity measurement by velocity test barrel. The average velocity of the sample cartridges conditioned at 70°F shall be 2,750 ± 30 ft/sec for gilding metal clad steel jacketed bullets or 2680 ± 30 ft/sec for gilding metal jacketed bullets at 78 feet from the muzzle of the weapon. The standard deviation of the velocities shall not exceed 32 ft/sec.

3.7.2.2 Velocity measurement by EPVAT test method. The average velocity of the sample cartridges conditioned at 70°F shall be 2,735 ± 30 ft/sec for gilding metal clad steel jacketed bullets or 2,665 ± 30 ft/sec

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for gilding metal jacketed bullets at 78 feet from the muzzle of the weapon. The standard deviation of the velocities shall not exceed 32 ft/sec.

3.8: Delete in its entirety and substitute the following:

"3.8 Port pressure. The port pressure measurement may be performed by either the copper-crush cylinder or EPVAT test method. If velocity is measured using the EPVAT system, the port pressure measurement must be performed using the EPVAT system as well. The average port pressure of the sample cartridges when conditioned for not less than 2 hours at 68° to 72°F and fired at that temperature shall be as noted in the applicable subparagraphs."

Delete paragraph 3.8.2 in its entirety and substitute the following:

"3.8.2 Measurement by EPVAT test method. The average port pressure of the sample cartridges shall not be greater than 73 Mpa (10,588 psi) and shall not be less than 55 Mpa (7,977 psi)."

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Table I, in requirement column:

Delete "3.7.1.5" and substitute "3.7.2" in one place.

Delete "3.7.1.6" and substitute "3.7.2.3" in two places.

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Table I, in requirement column:

Delete "3.7.1.7" and substitute "3.7.3" in 6 places.

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Table I, in requirement column:

Delete "3.7.1.7" and substitute "3.7.3" in 12 places.

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Table IV under requirement paragraph column:

Delete "3.7.1.7" and substitute "3.7.3" in one places.

Delete "3.9.1.5, 3.9.1.6" and substitute "3.7.2.1, 3.7.2.3" in one place.

Delete "3.9.1.1, 3.9.1.3" and substitute "3.7.1.1, 3.7.1.3" in one place

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Table IV under requirement paragraph column:

Delete "3.9.1.5, 3.9.1.6" and substitute "3.7.2.2, 3.7.2.3" in one place.

Delete "3.9.1.2, 3.9.1.4" and substitute "3.7.1.2, 3.7.1.4" in one Place

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\* Table V. change defect number 3 from:

"3. Hangfire 4/ 0 - 0 -"

To:

"3. Hangfire 4/ 9/

a. For use in gas operated weapons	0	1	0	1
b. For use in all weapons	0	-	0	-"

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\* Add Note 9/ to Table V as follows:

- 9/ a. Regardless of intended usage or packaging, F & C shall be performed in all weapons, including the M134 Mini Gun.
- b. If no hangfires are experienced, the lot of cartridges may be packaged for use in any weapon.
- c. If one hangfire is experienced in any weapon, the lot of cartridges shall be considered acceptable for packaging and use only in self powered (i.e. gas operated) weapons. The ammunition Data Card shall be annotated to reflect the hangfire and the PCO shall be notified.
- d. If two or more hangfires are experienced, the lot of cartridge shall be rejected and reported to the PCO."

The margins of this amendment are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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