

INCH-POUND

MIL-C-71139 (AR)  
 AMENDMENT 1  
 29 August 1995

## MILITARY SPECIFICATION

CARTRIDGE, 25MM  
 HIGH EXPLOSIVE INCENDIARY TRACER  
 SELF-DESTRUCT, M792

This amendment forms a part of MIL-C-71139 (AR), dated 4 January 1994, and is approved for use by the US Army Armaments, Research, Development and Engineering Center, and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 4

3.13, Delete in its entirety and substitute:

"3.13 Function, casualty and metal parts security. The cartridge shall function without casualty or hazards when conditioned and fired from the 25mm M242 Weapon at 200 spm. For lot acceptance testing, the cartridges shall be conditioned to ambient temperature. For First Article tests, one half the sample shall be conditioned to -54°C and the other half to +71°C. The cartridge shall exhibit metal parts integrity in the weapon feed mechanisms (chuting, feeding and chambering) (see 4.6.9)."

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Add Notes 1-4:

- 1/ Ammunition shall be conditioned at 18 deg to 24 deg C.
- 2/ The sample shall be rejected if malfunctions or firing casualties in excess of the "acc" number on Table III occur.
- 3/ Forty-five cartridges each shall be conditioned at -54 deg  $\pm$  3 deg C, 21 deg  $\pm$  3 deg C, and +62 deg  $\pm$  3 deg C.
- 4/ When the applicable "Acc" number is exceeded the lot is suspended (see paragraph 4.4.3.4)."

AMSC N/A

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FSC 1305

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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Delete Notes 1-4 in their entirety.

PAGE 14

4.4.2.3, Critical 4, Delete "Low propellant charge" and substitute "Low propellant charge (25% below established charge weight)".

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4.4.2.3, Sheet 2 of 2, Delete Note 1 in its entirety.

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Add paragraph 4.4.3.4:

"4.4.3.4 Projectile Performance Defects. In the event the accept level has been exceeded, the lot shall be suspended and referred for failure analysis. Failure analysis plan and implementation on both government furnished material and contractor furnished items shall be mutually agreed upon by both the contractor and the government. The failure analysis must be sufficient detail to assign cause to the M758 fuze or unfuzed cartridges.

If cause is assigned to the unfuzed cartridge, the lot shall be rejected."

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Figure 1, Item J, Delete "No closer than 1/4 inch" and substitute "No closer than 1/4 inch to extractor groove"

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4.6.9, Delete in its entirety and substitute:

"4.6.9 Function, casualty and metal parts security. The cartridges shall be tested in accordance with AS12013566, Section 11. The M242 Weapon used shall have a barrel with greater than 4,000 rounds fired through it. A vertical witness screen shall be positioned approximately 60m to 200m normal to the line of fire such that metal part failure data may be obtained. The cartridges shall be conditioned for a minimum of four hours at  $-54^{\circ} \pm 3^{\circ}\text{C}$ ,  $21^{\circ} \pm 3^{\circ}\text{C}$ , and  $71^{\circ} \pm 3^{\circ}\text{C}$ . When ambient

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temperature conditions are  $20^{\circ} \pm 10^{\circ}\text{C}$ , testing for the  $21^{\circ} \pm 3^{\circ}\text{C}$  group can be at range ambient conditions. All firings shall be at  $200 \pm 50$  spm in bursts of 21 to 28 rounds. The weapon shall be cooled to ambient temperature after each temperature and range group test is completed (100 maximum cartridges fired after which cooling to ambient is required). The witness screen shall be examined during the cooling period for fragment imprints and metal parts security failures. Evidence of yaw or other erratic flight characteristics shall be recorded and evaluated for cause. Witness screen replacement shall be provided as needed. Firing defects specified in Table IV shall also be determined during the cooling period. Any weapon stoppages obtained shall be recorded and evaluated for cause. Firing defects in excess of the quantities listed in Table IV shall be cause for rejection of the lot. The lot shall be rejected if 20% of the rounds fired exhibit more than 15 degrees yaw."

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6.11, From formula, Delete " $(X_i - X)$ " and substitute " $(X_i - \bar{X})$ ".

Custodian:  
Army-AR

Preparing Activity:  
Army-AR

(Project 1305-0119)