MILITARY SPECIFICATION

CARTRIDGES FOR CARTRIDGE ACTUATED/PROPELLANT ACTUATED DEVICES, GENERAL DESIGN SPECIFICATION FOR

This specification is mandatory for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 This specification covers the general requirements for design and establishes uniform methods for testing cartridges used for crew escape devices and other devices such as webbing cutters, cable cutters, guillotines, explosive bolts, and thrust reversers in aircraft systems. The purpose of the testing program is to determine performance, safety, soundness of mechanical design, and resistance to environments encountered during storage, handling, and service use. If a new cartridge has been developed concurrently with a new cartridge actuated device (CAD) or propellant actuated device (PAD), the CAD/PAD tests performed in accordance with MIL-C-83124 which involve the cartridge may be applied as a partial compliance with the cartridge tests required by this specification.

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

SPECIFICATIONS

Military

MIL-C-5541	Chemical Films and Chemical Film Materials for Aluminum and Aluminum Alloys
MIL-I-23659	Initiators, Electric, Design and Evaluation of
MIL-C-83124	Cartridges Actuated Devices/Propellant Actuated Devices, General Design Specification For

STANDARDS

Military

MIL-STD-143	Specifications and Standards, Order of Precedence for the Selection of
MIL-STD-331	Fuze and Fuze Components, Environmental and Performance Tests for
MIL-STD-810	Environmental Test Methods
MS33586	Metals, Definition of Dissimilar

PUBLICATION

Department of the Army Pamphlet

AMCP 706-110 Engineering Design Handbook
Experimental Statistics, Section 1

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3. REQUIREMENTS

3.1 Engineering design tests.- This specification makes provisions for engineering design testing.

3.2 Selection of specification and standards.- Specifications and standards for necessary commodities and services not specified herein shall be selected in accordance with MIL-STD-143.

3.3 Materials.- Materials for the cartridges shall be so selected as to be compatible with the propellant, explosive, delay composition, pyrotechnics, and propellant gas and shall withstand environmental, electromagnetic, functional, service, and storage conditions to which the cartridges will be exposed. Acceptance or approval of materials for design or during the course of manufacture shall in no case be construed as a guarantee of acceptance of the finished cartridges. Pyrocellulose materials shall not be included as wads, spacers, or closure discs.

3.3.1 Metals.- Exposed metals shall be of the corrosion-resisting type or suitably treated to resist the corrosive effects of fuels, salt spray, or atmospheric conditions to which the cartridges may be subjected in storage or normal service. The use of magnesium shall be subject to approval of the cognizant design agency for the specific application involved.

3.3.1.1 Dissimilar metals.- Dissimilar metals shall not be used in intimate contact with each other unless suitably protected against electrolytic corrosion. Dissimilar metals are defined in MS33586.

3.3.1.2 Aluminum alloy parts.- Unless otherwise authorized, all aluminum-alloy parts shall be covered with a chemical film conforming to MIL-C-5541

3.3.2 Explosive, propellant, delay composition, or pyrotechnic material.- Any explosive, propellant, delay composition, or pyrotechic material used in a cartridge shall be approved by the cognizant design agency prior to use in a cartridge.

3.3.3 Plastic parts.- The use of plastic parts shall be subject to the approval of the cognizant design agency for the specific application involved.

3.3.4 Fungus-resistant materials.- Materials which are nutrients for fungi shall not be used unless approved by the cognizant design agency.

3.4 Design and construction.- The cartridges shall be of the simplest and most efficient design consistent with the proposed use. Specific consideration shall be given to the factors of minimum size and weight while adhering to functional requirements, reliability, and safety of operation. All cartridges submitted for or subjected to engineering design testing shall be identical in design and manufactured by the same process and shall be from the same lot.

3.4.1 Performance reliability.- The cartridges must meet all performance requirements at a reliability of not less than 99.9 percent at a confidence level of 90 percent over the temperature range of -65° to +200°F.

3.4.2 Electric initiators/ignition elements.- Electric initiators/ignition elements used in cartridges must have met the applicable requirements of MIL-I-23659.

3.4.3 Nonelectric ignition system evaluation.- The cartridges shall be capable of passing the test of 4.5.5 prior to conducting any performance tests.

3.4.4 Service life.- The cartridges shall have a shelf life plus installed life of not less than 5 years from date of manufacture and an installed life of not less than 3 years.

3.4.5 Assembly.- The cartridges shall be as simple and safe to assemble as possible. The propellant, explosive, or pyrotechnic material shall be as tightly confined as practicable without hand stacking the charge. The use of spacers for this purpose shall be avoided.

3.4.6 Cartridge cases.- Cartridge cases shall be as lightweight as practicable. The cases must be strong enough to withstand environmental and performance tests specified herein. For electrically initiated cartridges the cartridge case shall not be a part of the electrical circuit.

3.4.7 Use of cartridges in additional devices.- When it is desired to use a previously approved cartridge in a new application, the adequacy of the cartridge design and performance shall be confirmed for the additional application by testing the cartridge concurrently with the cartridge actuated device during the engineering design testing of the device.

3.5 Performance.- The cartridges shall satisfy all design requirements specified herein after subjection to the applicable environmental tests. The parameters listed in 4.3.1 for the cartridge performance tests of Table I shall comply with the values and tolerances of the design requirements for the CAD/PAD. When the temperature requirements for a cartridge are outside the -65° to +200°F limits, the temperatures included in the design requirements shall apply in lieu of -65° to +200°F.

3.5.1 Leakage.- The cartridges shall pass a dry gas leak test. Cartridges which exhibit a leak rate in excess of 10^{-5} cc per second of air at a pressure differential of 1 ± 0.1 atmosphere shall be considered defective. In addition, those cartridges selected for the environmental tests of 4.5.6 shall be capable of passing a leak test at the conclusion of the environmental tests. The leak test shall be as specified in 4.5.4.

3.5.2 Environmental conditions.

3.5.2.1 Vibration.- The cartridges shall be capable of withstanding vibration conditions as specified in 4.5.7.1. After subjection to the vibration test, the cartridges shall meet the design performance requirements when test fired.

3.5.2.2 Shock.- The cartridges shall be capable of withstanding shock conditions as specified in 4.5.7.2. After subjection to the shock test, the cartridges shall meet the design performance requirements when test fired.

3.5.2.3 Six-foot drop.- The cartridges shall not fire when dropped from a height of 6 feet as specified in 4.5.7.3. After being subjected to the drop test, the cartridges shall meet the design performance requirements when test fired.

3.5.2.4 Forty-foot drop.- To ensure fail-safe capability, the cartridges shall not fire when dropped from a height of 40 feet as specified in 4.5.7.4 and shall be safe for handling and disposal.

3.5.2.5 Temperature-shock/humidity/altitude.- The cartridges shall be capable of withstanding temperature-shock/humidity/altitude cycling conditions as specified in 4.5.7.5 and shall meet the design performance requirements when test fired.

3.5.2.6 High temperature.- The cartridges shall be capable of withstanding high temperatures of 200°F as specified in 4.5.7.6 and shall meet the design performance requirements when test fired.

3.5.2.7 Low temperature.- The cartridges shall be capable of withstanding low temperatures of -65°F as specified in 4.5.7.7 and shall meet the design performance requirements when test fired.

3.5.2.8 Salt fog.- The cartridges shall be capable of withstanding exposure to salt fog as specified in 4.5.7.8. After subjection to the salt fog test, the cartridges shall meet the design performance requirements when test fired.

3.5.3 Cook-off temperature.- The maximum temperature (within 25°F) shall be established to which a cartridge can be exposed for a period of 1 hour without cook-off. The maximum temperature shall be determined by the cook-off test of 4.5.8 and shall be not less than the value in the cartridge design requirements.

3.5.4 High temperature exposure (12 hours).- The maximum temperature (within 25°F) shall be established to which cartridges may be exposed for 12 hours and function within design performance requirements when fired after cooling to 70°F. The maximum temperature shall be determined by the high temperature exposure test of 4.5.9.

3.6 Dimensions.- Unless otherwise specified, all dimensions shall apply after all manufacturing (machining, sizing, etc), process treatments, (plating, anodizing, heat treating, etc) and nondestructive testing have been completed. No part of the assembly shall deviate from the drawing configuration, dimensions, and tolerances.

3.7 Product marking.- Each cartridge shall be clearly and permanently identified with the cartridge designation, identifying number, lot number, loading date (month and year), and manufacturer's identification symbol. No other markings shall appear thereon except those specified herein.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection.- Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the supplier may utilize his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Materials.- Inspection and testing of component parts and assemblies shall be made to determine compliance with 3.3. Where defects, incompatibility, or inferior quality is evident, and the Government deems material analysis necessary, the contractor will be requested to submit samples or specimens to the cognizant design agency for analysis and approval.

4.2 Classification of tests.- The testing of cartridges shall be classified as engineering design tests.

4.3 Test conditions.

4.3.1 Measurements and records.- All functional tests of cartridges shall be performed with the equipment mounted and loaded in a manner to simulate service conditions as closely as possible. Performance parameters such as the following shall be recorded during functional tests:

a. Pressure versus time for ballistic cycle time
b. Velocity (at end of power stroke)
c. Muzzle velocity
d. Displacement of simulated load versus time

e. Thrust versus time for ballistic cycle time
f. Acceleration versus time
g. Resistive load versus time
h. Time interval between actuating firing mechanism and beginning of movement of load or start of pressure rise.
i. Time interval between actuating firing mechanism and completion of operating cycle

4.3.2 Instrumentation.- Any state-of-the-art-type instrumentation and recording equipment may be used, e.g., oscillograph, oscilloscope, or magnetic tape. Transducers may be any state-of-the-art-type, e.g., piezoelectric, strain gage, variable reluctance, capacitive, or potentiometer. However, accuracy of all test apparatus shall conform to requirements of MIL-STD-810. Documented calibration records shall be maintained and be available for inspection by the cognizant design agency.

4.4 Engineering design tests.- All engineering design test samples shall have been subjected to inspection and examination of 4.3.1 and 4.5.2. The engineering design tests shall include all the tests listed in Tables I and II and shall be conducted on test samples as specified in the referenced tables. Data recorded during functional tests shall include that of 4.3.1. Indicated temperatures shall be within plus or minus 5°F.

TABLE I. ENGINEERING DESIGN TESTS

Test	Applicable Test Paragraph	Units Required
X-ray	4.5.3	*173***
Leakage	4.5.4	*173
Nonelectric Ignition system evaluation	4.5.5	12
**Shock	4.5.7.2	9
6-ft drop	4.5.7.3	6
40-ft drop	4.5.7.4	6
**Vibration	4.5.7.1	9
Performance at +70°F	4.5.6	20
Performance at -65°F	4.5.6	30
Performance at +200°F	4.5.6	30
**Temp-shock/hmd/alt	4.5.7.5	9
High temp (+200°F)	4.5.7.6	12
**Low temp (-65°F)	4.5.7.7	9
Salt fog	4.5.7.8	12
Cook-off	4.5.8	6
High temp exposure	4.5.9	3

*Expend to tests listed below.
**Test is part of sequence tests, Table II.
***Absolute minimum number of units required with no allowance for contingencies.

TABLE II. Sequence Tests for Cartridges

Test	Applicable Test Paragraph	No. Tested & No. Diverted to Additional Tests	No. Examined & Test Fired +70°F	-65°F	+200°F
Shock	(4.5.7.2 (4.5.6	36 → 9	3	3	3
Temp-shock/hmd/ alt	(4.5.7.5 (4.5.6	27 → 9	3	3	3
Low temp (-65°F)	(4.5.7.7* (4.5.8	18 → 9	3	3	3
Vibration	(4.5.7.1 (4.5.6	9 → 9	3	3	3
			12	12	12

*Test firing at -65°F shall comply with 4.5.7.7. Units for test firing at other temperatures shall be reconditioned in accordance with 4.5.6.

4.4.1 Reliability analysis.- The performance necessary to demonstrate the required 99.9 percent reliability (or probability) of the engineering design test lot at 90 percent confidence level shall be determined by the upper limit (UL) and lower limit (LL) as computed from the sample size in accordance with the method of Statistical Tolerance Limits as outlined in Section 1 of Pamphlet AMCP 706-110, Engineering Design Handbook. This analysis applies only to those 80 cartridges from the performance test of Table I. The computations will be made with the formulae:

$$UL = \bar{X} + KS$$

$$LL = \bar{X} - KS$$

where

$\bar{X}$ = mean (sample)
K = tolerance factor
S = standard deviation (sample)
N = sample size
P = reliability

The K values to be used for determining the tolerance limits are specified in Table III of this specification. Analysis shall include the performance parameters listed in 4.3.1, and acceptable performance shall be in accordance with 3.5. If the computed UL or LL is outside design tolerance limits of any required parameter, it shall be cause for rejection.

TABLE III. Tolerance Factors (K) for Normal Distributions

N	90% Confidence Level	
	Two Sided P = 99.9	One Sided P = 99.9
5	6,879	6.112
6	6.188	5.556
7	5.750	5.201
8	5.446	4.955
9	5.220	4.772
10	5.046	4.629
11	4.906	4.515
12	4.792	4.420
13	4.697	4.341
14	4.615	4.274
15	4.545	4.215
16	4.484	4.164
17	4.430	4.118
18	4.382	4.078
19	4.339	4.041
20	4.300	4.009
21	4.264	3.979
22	4.232	3.952
23	4.203	3.927
24	4.176	3.904
25	4.151	3.882
30	4.049	3.794

4.4.2 Test plan.- The contractor shall submit a test plan prior to engineering design testing as specified in the data requirements of the contract.

4.4.3 Test report.- After completion of engineering design testing, the contractor shall submit a test report as specified in the data requirements of the contract.

4.4.4 Rejection and retest (engineering design tests).- Failure of any cartridge subjected to the engineering design tests to conform to the applicable requirements of this specification or the approved design requirements shall be cause for rejection of the item. Cause for rejection shall include the inability of a cartridge to demonstrate performance within test parameters using statistical tolerance limits as specified in 4.4.1. Cartridges shall be redesigned or reworked to correct defects, and all tests shall be repeated. Before the tests are repeated, full particulars concerning the failure and action taken to correct the defects shall be submitted to the cognizant design agency for concurrence and permission to proceed with testing.

4.5 Test methods.

4.5.1 Component inspection.- Each part of the cartridge shall be 100 percent inspected for conformance to the applicable drawing.

4.5.2 Examination of product.- Examination of the cartridges shall be made to detect visible defects and to determine that the items meet the requirements with respect to workmanship and marking, and that they conform to the applicable drawing.

4.5.3 X-ray test.- All cartridges shall be X-rayed to assure presence and proper orientation of all components and to determine whether defects exist.

4.5.4 Leakage test.- All cartridges shall be tested with a dry gas leak tester of sufficient sensitivity to ascertain whether the cartridges meet the leak rate requirement of 3.5.1.

4.5.5 Nonelectric ignition system evaluation.- Ignition system installation in the applicable cartridge shall be evaluated prior to conducting any other tests listed in Table I. The test is a "go - no-go" type test in which it is not necessary to measure any performance parameters. Success or "go" will be determined by auditory and visual means, i.e., it sounded right and it appeared to burn properly without hangfire. The method of test is as follows: Conduct 12 tests at -90°F. If any cartridge is not a success or "go," conduct 12 more tests with new cartridges at -80°F. If any cartridge is not a success or "go" at -80°F, conduct 12 more tests with new cartridges at -70°F. If any cartridge fails to meet the success or "go" criteria at -70°F, the ignition system shall be redesigned to pass this test. These tests shall be conducted to ensure that the ignition system is reliable at -65°F. If all the test samples are success or "go" at either -90°, -80°, or -70°F, no further ignition system testing will be required.

4.5.6 Performance test.- The cartridges and, where practicable, their firing test devices shall be temperature conditioned and maintained at the required temperature for at least 1 hour after the temperature of all parts, cartridges, and propellants has been stabilized; then the cartridges shall be test fired. A simulated test device and cartridge with a temperature sensitive element within the cartridge charge shall be used as a grain temperature monitor during temperature conditioning. Performance shall comply with the requirements of 3.5. If the cartridges cannot be test fired within the temperature chamber, the test devices shall be fired within 5 minutes after removal from the chamber. Whenever it is necessary to repeat low (-65°F) temperature conditioning of a cold device, all condensation shall be removed from the device before it is returned to the temperature conditioning chamber.

4.5.7 Environmental tests.- Environmental testing shall be conducted to determine compliance with the requirements of 3.5.

4.5.7.1 Vibration.- This test shall be conducted in accordance with the vibration test selection chart in table 514-1 (aircraft category, procedure 1, parts 1, 2, and 3, and curve Z up to and including 2000 cps) of MIL-STD-810, except that for each resonant and cycling period the test specimens shall be divided equally for vibration at -65°, +70°, and +200°F. After vibration testing has been completed, the cartridges shall be tested for leakage as specified and then allocated to the tests specified in Table II.

4.5.7.2 Shock.- This test shall be conducted in accordance with method 516, procedure I of MIL-STD-810. The shock pulse waveform shall be terminal peak sawtooth. The peak amplitude shall be 20g and the duration shall be 11 ms. The shock test specimens shall be allocated to the tests specified in Table II.

4.5.7.3 Six-foot drop test.- Six cartridges shall be dropped onto a 2-inch-thick steel plate embedded in concrete to impact as follows: (1) two with head up, (2) two with head down, and (3) two horizontal. A new cartridge shall be used for each drop and no cartridge shall fire during this test. Subsequent to the drop test, the cartridges shall be test fired at 70°F.

4.5.7.4 Forty-foot drop test.- This test shall be conducted in accordance with test 103 of MIL-STD-331. Six cartridges shall be dropped to impact in the following positions: (1) two with head up, (2) two with head down, and (3) two horizontal. The cartridges shall meet the requirement of 3.5.2.4.

4.5.7.5 Temperature shock/humidity/altitude.- The cartridges shall be subjected to the temperature shock/humidity/altitude test as outlined below. The schedule has been arranged in such a manner that operations are not required outside normal working hours except for such supervision as may be necessary to insure proper operation of the test equipment. It is not mandatory that the day/clock time schedule given below be followed: however, it is mandatory that the time, environmental, and sequence requirements be adhered to. It is also noted that only two conditioning chambers are required to accomplish this test. No less than two chambers may be used and still accomplish the temperature shock portion of this test. If it is desired to use three chambers, it is permissible provided the time, environmental, and sequence requirements are met. The fluctuations from the specified temperatures shall not exceed 5°F. When the temperature/altitude chamber door is opened to place test items inside, the chamber pressure will become atmospheric. The time required to return the chamber pressure to 0.65 pounds per square inch (psi) shall not exceed 1 hour. Test specimens shall be supported on screen trays or racks so that all areas are exposed to the prescribed atmospheric conditions at all times throughout the test.

Procedure

Monday 0800 - Place test items in a chamber maintained at +70°F at 50 percent relative humidity (RH).

1200 - Raise chamber temperature to +160°F and the RH to 95 percent. The chamber temperature shall reach +160°F at 95 percent RH not later than 1300.

1600 - Remove test items from above chamber and immediately place in a chamber maintained at -65°F at a pressure altitude of 70,000 feet. (0.65 psi)

Tuesday 0800 - Remove test items from above chamber and immediately place in a chamber maintained at +70°F at 50 percent RH.

1200 - Remove test items from above chamber and immediately place in a chamber maintained at -65°F at a pressure altitude of 70,000 feet. (0.65 psi)

1600 - Remove test items from above chamber and immediately place in a chamber maintained at +160°F at 95 percent RH.

Wednesday 0800 - Reduce chamber temperature to +70°F at 50 percent RH. The chamber temperature shall reach +70°F at 50 percent RH not later than 0900.

1200 - Raise chamber temperature to +160°F at 95 percent RH. The chamber temperature shall reach +160°F at 95 percent RH not later than 1300.

1600 - Remove test items from above chamber and immediately place in a chamber maintained at -65°F at a pressure altitude of 70,000 feet. (0.65 psi)

Thursday 0800 - Remove test items from above chamber and immediately place in a chamber maintained at +70°F at 50 percent RH.

1200 - Remove test items from above chamber and immediately place in a chamber maintained at -65°F at a pressure altitude of 70,000 feet. (0.65 psi)

1600 - Remove test items from above chamber and immediately place in a chamber maintained at +160°F at 95 percent RH.

Friday 0800 - Reduce chamber temperature to +70°F at 50 percent RH. The chamber temperature shall reach +70°F at 50 percent RH not later than 0900.

1200 - Raise chamber temperature to +160°F at 95 percent RH. The chamber temperature shall reach +160°F at 95 percent RH not later than 1300.

1600 - Remove test items from above chamber and immediately place in a chamber maintained at -65°F at standard ambient pressure.

This schedule shall be followed for a total of 4 weeks (28 days) except that on the second and fourth weekends the soak time shall be from 1200 on Friday until 0800 on Monday at a temperature of +160°F at 95 percent RH. At the conclusion of the temperature-shock/humidity/altitude test, the test items shall be allocated to the tests specified in Table II.

4.5.7.6 High temperature.- This test shall be conducted in accordance with method 501, procedure I of MIL-STD-810 except that the cartridges shall be exposed to a temperature of 200°F until thermal stabilization is reached and shall be maintained at that temperature for a period of 50 hours. Then the cartridges shall be test fired at 200°F. Setup time between removal from the conditioning cabinet and firing shall not exceed 5 minutes.

4.5.7.7 Low temperature.- This test shall be conducted in accordance with method 502, procedure I of MIL-STD-810 at -65°F. Then the cartridges shall be allocated to the tests specified in Table II. When necessary, the test device may be removed from the conditioning cabinet, set up, and fired within a period of time not to exceed 5 minutes.

4.5.7.8 Salt fog.- This test shall be conducted in accordance with method 509 of MIL-STD-810. After the salt fog test has been completed, the specimens shall be test fired at 70°F.

4.5.8 Cook-off test.- Three cartridges shall be placed in an oven preheated to the highest temperature which it is estimated for cartridges will withstand for 1 hour. If no cartridge cooks off during 1 hour, the temperature shall be increased 25°F and the test repeated with three new cartridges. The test shall be repeated in 25°F increments until cook-off of at least one cartridge occurs within a 1-hour period. If cook-off occurs in the first group tested, the temperature shall be decreased 25°F and the test repeated with three new cartridges. The test shall be repeated in 25°F decrements until cook-off does not occur within a 1-hour period.

4.5.9 High temperature exposure (12 hours).- Three cartridges shall be placed in an oven preheated to a temperature 25°F less than the maximum determined for exposure without cook-off in 4.5.8. The temperature shall be maintained for 12 hours. If no cartridge cooks off, the three cartridges shall be cooled to 70°F and functionally tested. If any cartridge cooks off, or fails to meet design performance requirements after cooling, the test shall be repeated with additional groups of cartridges, decreasing the temperature in increments of 25°F, until design performance requirements are met.

5. PREPARATION FOR DELIVERY (Not applicable)

6. NOTES

6.1 Intended use.- The cartridges covered by this specification are intended to be used in cartridge-actuated/propellant-actuated devices.

6.2 Data.- For the information of contractors and contracting officers, any of the data specified in (1) 4.4.2, 4.4.3, and 6.2.1, (2) applicable documents listed in section 2 of this specification, or (3) referenced lower-tier documents need not be prepared for the Government and should not be furnished to the Government unless specified in the contract or order. The

data to be furnished should be listed on the DD Form 1423 (Contractor Data Requirements List) which should be attached to and made a part of the contract or order.

6.2.1 Contractor's design requirements and specifications.

6.2.1.1 All inert and explosive materials used in cartridges shall be referenced to approved Government specifications if such exist. Proprietary materials should not be used unless specifically approved in writing by the cognizant design agency. At the direction of the cognizant design agency, the contractor should submit cartridge drawings, in sufficient detail as to parts, special processes, and techniques to permit the preparation of documentation in accordance with 6.2.1.2 through 6.2.1.2.2. The contract should specify whether the documentation is to be prepared by a Government agency or by the contractor.

6.2.1.2 Drawings should be in accordance with MIL-D-1000, category E, Form 1.

6.2.1.2.1 Production and acceptance specifications should be in accordance with Defense Standardization Manual DSM 4120.3-M.

6.2.1.2.2 Classification of characteristics should be in accordance with the cognizant design agency requirements.

6.2.1.3 Complete manufacturing drawings of the cartridges and, where applicable, of test devices and equipment used in development of cartridges should be submitted to the cognizant design agency no later than concurrently with the test report.

6.2.1.4 Copies of results of all tests performed by the prime or subcontractors during the development and evaluation of cartridges should be furnished to the cognizant design agency as directed. These results should include all statistical calculations made during evaluation testing.

Custodian:
Army - MU
Navy - AS
Air Force - 11

Preparing activity:
Army - MU

Project No. 1377-0247

Review activities:
Air Force - 11, 70

SPECIFICATION ANALYSIS SHEET

Form Approved
Budget Bureau No. 22-R255

INSTRUCTIONS: This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.

SPECIFICATION

MIL-C-83125

ORGANIZATION

CITY AND STATE

CONTRACT NUMBER

MATERIAL PROCURED UNDER A

☐ DIRECT GOVERNMENT CONTRACT ☐ SUBCONTRACT

1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A. GIVE PARAGRAPH NUMBER AND WORDING.

B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3. IS THE SPECIFICATION RESTRICTIVE?

YES NO *(If "yes", in what way?)*

4. REMARKS *(Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)*

SUBMITTED BY *(Printed or typed name and activity - Optional)*

DATE

DD FORM 1 JAN 66 1426

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.