AA-D-00600C
December 1, 1990
INTERIM REVISION OF
AA-D-600B
March 26, 1969

FEDERAL SPECIFICATION

DOOR, VAULT, SECURITY

This Interim Federal Specification was developed by the Furniture Commodity Center, Federal Supply Service, General Services Administration, Washington, D.C., 20406, based upon current available technical information. It is recommended that Federal agencies use this document in procurement and forward any recommendations for changes to the preparing activity at the address shown above.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers security vault doors which are designed to conform to the minimum standards for physical security equipment as required by the Information Security Oversight Office Directive governing the safeguarding of national security information. The doors provide protection against authorized entry for the periods of time specified in 1.2.1.

1.2 Classification. The vault doors under this specification shall be of the following classes, as specified (see 6.2).

1.2.1 Classes.

Class 5 - Resistant to 20 man-hours surreptitious entry, 30 man-minutes covert entry and 10 man-minutes forced entry.

Class 6 - Resistant to 20 man-hours surreptitious entry, 30 man-minutes covert entry.

1.2.2 Types.

Type IR - Right opening swing; with optical device.
Type IL - Left opening swing; with optical device.
Type IIR - Right opening swing; without optical device.
Type IIL - Left opening swing; without optical device.

1.2.3 Styles.

FSC 7110

Style H - Hand change combination lock.
Style K - Key change combination lock.

2. APPLICABLE DOCUMENTS

2.1 Government publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issue in effect on the date of invitation for bids or request for quotation shall apply.

Federal Specifications:

FF-L-2740	Lock, Combination.
QQ-C-320	Chromium Plating (Electrodeposited).
QQ-P-416	Plating, Cadmium, (Electrodeposited).
TT-B-621	Boxes, Wood, Nailed and Lock-Corner.
TT-C-490	Cleaning Methods and Pretreatment of Ferrous Surfaces for Organic Coatings.
PPP-B-650	Crates, Wood, Open and Covered.
PPP-B-1055	Barrier Material, Waterproofed, Flexible.

Federal Standards:

Fed. Std. No. 123	Marking for Domestic Shipment (Civil Agencies).
Fed. Std. No. 595	Colors.

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the price indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U S. Government Printing Office, Washington, D.C., 20402.)

(Single copies of this specification and other Federal specifications required by activities outside the Federal Government for bidding purposes are available from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, D.C., Atlanta, Chicago, Kansas City, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle.)

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

(Sample panels of the standard colors are obtainable, without charge, from

the Business Service Center, Federal Supply Service, General Services Administration, Washington, DC 20407, or from the Business Service Center of the nearest Regional Office.)

Military Standards:

MIL-STD-129 - Marking for Shipment and Storage.

(Copies of Military Specifications and Standards required by contractors in specification procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal, shall apply.

American Society for Testing and Materials (ASTM):

B-633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel.

(Application for copies should be addressed to the American Society for Testing and Materials, 1616 Race Street, Philadelphia, PA 19103.)

National Motor Freight Traffic Association, Inc., Agent:

National Motor Freight Classification.

(Application for copies should be addressed to the American Trucking Association, Inc., Traffic Department, 1616 P Street, NW, Washington, DC 20036.)

Uniform Classification Committee, Agent:

Uniform Freight Classification.

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

3. REQUIREMENTS

3.1 Qualification. The vault doors furnished under this specification shall be products which have been tested and have passed the qualification tests specified in section 4, and have been listed on or approved for listing on the applicable Federal qualified products list (QPL).

3.1.1 Qualification suspension.

3.1.1.1 Development of entry techniques. The doors qualified under this specification will be continuously tested by the Government during the term of qualification to determine whether the surreptitious or forced entry protection afforded by the doors should or can be improved. If at any time, entry techniques are developed within the framework of the specification which affect a door's security integrity, it shall be removed from the QPL.

3.1.1.2 Change in specification requirements. This specification will be reviewed by the Government to determine whether the specification requirements should or can be changed to improve product quality. If, at any time, requirements are changed and such changes affect the qualification status of a qualified door, it shall be removed from the QPL and the manufacturer will be required to modify the product to the extent necessary to comply with the specification changes and have the product requalified.

3.2 Materials. Materials used in the door's construction shall be as specified herein. Materials not specified shall be of good commercial quality, suitable in all respects for the purpose intended.

3.2.1 Steel. Steel used in the door shall be type, thickness and strength to meet all applicable requirements of this specification. Steel shall be free from rust, scale, pits, buckles and other imperfections which may adversely affect the appearance or the serviceability of the finished product.

3.2.2 Face hardware. The face hardware, excluding combination locks, shall be satin finished, anodized aluminum, type 430 corrosion resistant steel or satin finished chromium plating on steel or on die cast zinc, brass or bronze. The exposed surfaces of all hardware used on a single unit shall be finished to match each other within the limits of the base material and protective coating used. The exposed surfaces of all face hardware shall be free of sharp edges, burrs, pits, nicks or scratches that penetrate the protective plating or anodizing.

3.2.3 Finishing materials.

3.2.3.1 Enamel and lacquer. The final coat for the door shall be either baked enamel, air dried, textured finish, nitrocellulose lacquer or water reducible coating. The quality of the final coat and its application shall be

in accordance with good commercial standards and practices. The color shall be as specified in 3.2.4.

3.2.3.2 Chromium plating. Chromium plating shall be in accordance with class I, type II, of QQ-C-320.

3.2.3.3 Cadmium plating. Cadmium plating shall be in accordance with class I, type I, of QQ-P-416.

3.2.3.4 Zinc plating. Zinc plating shall be in accordance with ASTM B-633.

3.2.4 Color of finish. The color of finish shall be gray, color no. 26134, of Fed. Std. No. 595.

3.3.1 Design. The design shall provide for an end product that is practical, durable, and acceptable in general appearance. The doors shall be hinged to swing right or left, as specified (see 6.2).

3.3.2 Assembly. The door frame shall be considered a part of the door for purposes of tamper resistance testing and shall afford the same security protection as that of the door. Protection for the extended locking bolts shall be built into the door frame. The overall width of the door frame shall not exceed the width of the clear door opening by more than 16 inches. The door frame shall be designed to mount in a structural wall opening ranging from 47 to 59 inches wide and 82 to 83 inches high. Except that the hinges shall be removable from the outside, the door shall be assembled in such a manner as to preclude the removal or loosening of any of the door's components when the door is closed and locked. All welding and brazing shall be sound, without porosity and shall accomplish secure and rigid joints in proper alignment. All protruding or depressed welds on the door's exterior surfaces shall be filled and sanded or ground smooth. The door and frame shall be in perfect alignment and operation of the locking mechanism, including the locking bolts, shall be smooth and positive without binding or jamming of parts. The door shall withstand the test in 4.4.8.1.

3.3.3 Clear door opening. The vault door assembly shall be of one size, and when installed, shall have a clear door opening of 78 inches high and 40 inches wide. A forming tolerance of +/- 1/8 inch shall be permitted.

3.3.4 Wall thickness. The door assembly shall be adaptable to one of the following wall thicknesses, as specified (see 6.2): 6-inch; 8-inch;

10-inch; or 12-inch. The assembly design shall provide a +/- 1/2-inch adjustment to allow for variations in the nominal wall thickness (see 6.4).

3.3.5 Door frame. The door frame shall be non-grout type and the frame and door shall be mounted so that there shall be not more than 1/8-inch clearance between the door and door frame. The frame shall be designed so that when attached to the wall, the wall clamping bolts will be exposed only on the inside of the vault. The frame shall have leveling and adjusting screws to compensate for building sag which may occur at any time in the future.

3.3.6 Door pull and throw-bolt handles. The door pull and throw-bolt handles shall be of the material specified in 3.2.2. They shall be not less than 4 inches in length and of designs consistent with their intended usages. The handles shall be without burrs, nicks, scratches, and sharp edges. They shall be securely and firmly attached to the door front to withstand loosening in testing and in operation during the service life of the door. The door pull handle may be integral with the throw-bolt handle. Removal of the handle arbor shall be controlled only from the inside of the door. The throw-bolt handle shall require not more than 5 pounds torque to engage or disengage the bolt work mechanism, and the initial force required to swing the unlocked door from any position shall not exceed 10 pounds at the operating handle.

3.3.7 Door stop. A door stop to prevent the door’s face hardware from striking wall surfaces shall be furnished with the door. The stop shall be designed to be mounted on a wall or floor and not to the door. The stop shall be able to withstand hard usage. The stop shall not scratch or scar the door’s painted finish when the door is swung open against it.

3.3.8 Door striker. The door shall have a striker on both the front and hinged edges to minimize play or shake in the door when in the locked condition. The fit of the door to the striker on both the front and hinged edges shall be such that there is not more than 1/32-inch play or shake in the door when the bolts are thrown to the locked position.

3.3.9 Door hinges. The door shall be mounted to the frame by not less than three anti-friction bearing hinges, so designed to allow the door to be opened approximately 180 degrees. The hinges shall be removable from the outside.

3.3.10 Door threshold. The door threshold shall be designed to provide a ramp at the door threshold of approximately 1/4-inch to permit free swing of the door after its erection. If receptive cups, ports, or grooves are used,

they shall be recessed not less than 1/2-inch below the bolt in its extended position to prevent dirt or other substances from obstructing the locking mechanism.

3.3.11 Back cover plate. A back cover plate of not less than 0.0598 inch thickness shall completely enclose the back of the door. The back plate shall be firmly and securely fastened to the door and shall be reinforced or attached by a method to prevent sagging, bulging or distortion. The back plate shall be easily removed for service purposes by the use of common hand tools. The back plate shall have an opening covered by an inspection plate. The opening, with the inspection plate removed, shall be large enough and positioned so as to allow maintenance of the door's combination lock and cam assembly.

3.4 Combination lock. The door shall have a changeable combination lock which shall control the door locking mechanism. The lock shall meet the requirements of FF-L-2740. The lock shall be hand change or key change, as specified (see 6.2). The lock design or installation shall not compromise the integrity of the door.

3.4.1 Lock installation. The lock's dial ring shall be mounted so as to be flush to the surface of the door. The attachment of the dial ring shall be firm and secure without movement or side play. The lock case shall be firmly and securely attached to the door by suitable and effective means so that there is no movement or side play to the lock case. The lock shall not be modified in any manner from the formation supplied by the lock manufacturer, except that the spindle may be cut to proper length.

3.5 Locking mechanism. The engaging bolts shall be of a design, size and material strength to withstand the applicable tests in Section 4. The bolts shall operate easily and smoothly, without binding or jamming, in performing their intended function. The bolts shall not dent or otherwise deface the door frame in their movement. The attaching linkage shall be channeled, strapped or welded. the locking mechanism shall have a detent to lock the bolts in the open position when the bolts are retraced and the door swung open. The detent shall be designed so that it cannot be inadvertently tripped, permitting the bolts to be thrown to the engaged position.

3.6 Locking mechanism and lock mounting drawings. Complete, exploded view drawings of the locking mechanism and lock mounting, with individual parts indexed, shall be furnished by the manufacturer upon specific request of the purchaser.

3.7 Government testing. The Government testing facility for the General Services Administration reserves the right of testing the vault door in accordance with standards that are privileged to the Government.

3.8 Resistance to entry techniques.

3.8.1 Surreptitious and forced entry techniques. The vault door shall withstand the applicable tests in 4.4.8 for not less than the periods of time specified hereunder.

Class 5 door - 20 man-hours surreptitious entry, 30 man-minutes covert entry, 10 man-minutes forced entry.

Class 6 door - 20 man-hours surreptitious entry, 30 man-minutes covert entry.

3.8.2 Radiology techniques. The vault door shall withstand the test in 4.4.8.3 for not less than 20 man-hours.

3.9 Escape device. Each vault door shall have an escape device which shall be permanently installed on the inside face of the door. The device shall permit ready escape for persons locked inside the vault area. Access to the device shall be only from inside the vault, and its design shall be such that under normal operating conditions it can not be activated from the outside. A decal shall be permanently affixed to the inside face of the door frame outlining, in easily read letters, completely understandable instructions for activating the device to open the door. Neither the design of the device nor its installation shall affect the door's resistance to entry techniques.

3.10 Optical device. When specified, the door shall have a wide angle optical device an the purchaser should indicate whether the device should permit observation from inside to outside of the vault or vice versa. The optical device shall be installed in such a manner so as not to affect the door's security protection. The device shall be located in the door approximately five feet above the inside vault floor and as close to the center of the door as practicable. However, in no case shall it be closer than eight inches to the clear opening edge of the door either on the hinged or front edge.

3.11 Lubrication. The door's moving parts requiring lubrication shall have a permanent type lubricant applied which is suitable to the varied climatic conditions likely to be encountered during the service of the product.

3.12 Pretreatment and finish.

3.12.1 Pretreatment. All exterior and interior ferrous metal surfaces shall be treated for painting in accordance with any type in TT-C-490. Special attention shall be given to the door's interior to assure that all welds are clean and that all slag, spatter, and dirt accumulation is removed.

3.12.2 Finish. The final coat used for the finish shall be as specified in 3.2.3.1 and it shall be applied to all exterior and interior metal surfaces except plated metal. The minimum total finished film thickness of the final coat shall be not less than 1.0 mil. The finish shall level out to produce uniform exposed surfaces without runs, wrinkles, grit, areas of thin film or no film, or separation of color. A textured or crinkle finish may be used. Special attention shall be given to insure that all surfaces, are adequately protected against rust. The final finish shall withstand the test in 4.4.8.4 without evidence of cracking, flaking, or loss of adhesion of the finish. Two test panels of 0.0359-inch thick steel shall be furnished with the sample door for the purpose of the test. One panel shall be prepared to reflect the inner coating and one to reflect the outer coating.

3.12.3 Plating. Bolts, screws, nuts, and similar hardware shall be made to resist rust by electrogalvanizing or by zinc, cadmium, or chromium plating as specified in 3.2.3.

3.13 Labels. Each door furnished under this specification shall bear the metal labels specified hereunder.

3.13.1 General Services Administration label. The label shall be affixed to the outside face of the door. The label shall have a silver background and red letters not less than 1/8-inch in height. The label shall show the following:

GENERAL SERVICES ADMINISTRATION
APPROVED SECURITY VAULT DOOR
MANUFACTURER'S NAME

3.13.2 Identification label. The label shall be affixed to the inside face of the door frame. The label shall show the door model and serial number, date of manufacture, and Government contract number.

3.13.3 Certification label. Affixed to the inside face of the door frame shall be a label which shall bear the following certification:

For the class 5 door:

"This is a U.S. Government cl. 5 vault door which has been tested and approved by the Government under Fed. Spec. AA-D-600C. It affords the following security protection:

"20 man-hours against surreptitious entry.
30 man-minutes against covert entry.
10 man-minutes against forced entry.

"The protection certified above applies only to the door and not to the vault proper."

For the class 6 door:

"This is a U.S. Government cl. 6 vault door which has been tested and approved by the Government under Fed. Spec. AA-D-600C. It affords the following security protection:

"20 man-hours against surreptitious entry.
30 man-minutes against covert entry.

"The protection certified above applies only to the door and not to the vault proper."

3.13.4 Number label. All vault doors, under this specification, shall have a number label securely affixed to the front face with a durable adhesive or drive screws. Regardless of the method used, the label attachment shall not degrade the door security. The label shall be mounted on the door frame, above or to the left side of the door. The label shall be nominal 0.020 inch thick, satin finished aluminum and shall be 2-1/2 by 11/16 inches. The label numbering system shall be established by the manufacturer to provide non-repetitive numbers. The label numbers shall be established by the manufacturer to provide non-repetitive numbers. The label numbers shall be minimum 3/16 inches high and shall be embossed.

3.14 Workmanship. The workmanship shall be of a quality to produce a serviceable and well finished end item, able to withstand hard daily usage. The edges of all exposed parts and sheets shall be protected by folding, beading, flanging, or grinding to eliminate burrs, roughness, and sharp edges. The bending of channels and flanges shall be straight and smooth. Welding and brazing shall produce secure and rigid connections. Lock washers, cotter pins, clips, and other retainers, or built-in features shall be used to prevent loosening of screws, bolts, and nuts which may cause disengagement of parts and possible lock-out. Moving parts shall operate smoothly without binding or jamming. The door shall be free of any defects or features which may adversely affect its appearance and serviceability or which may cause personal injury.

3.15 Replacement of parts. Parts subject to replacement, such as combination lock and face hardware, shall be capable of identical replacement in the field without use of special tools or specially qualified personnel. Such replacement shall be possible without affecting the security integrity of the door.

3.16 Spare parts list. A spare parts list of all door parts which may be subject to subsequent replacement shall be furnished with each door delivered under contract. The parts list shall clearly identify the parts by descriptions and part numbers. The list shall be printed on paper or other suitable material and bonded by glue or adhesive to the inside face of the door frame.

4. QUALITY ASSURANCE PROVISIONS

4.1 Inspection responsibility. Except that testing for qualification shall be performed by an agency designated by General Services Administration, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own or any other inspection facility or service acceptable to the Government. Inspection records of the examinations and tests shall be kept complete and available to the Government as specified in the contract or order. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to the prescribed requirements.

4.2 Component and material inspection. In accordance with 4.1, 4.4.9, the supplier is responsible for insuring that components and materials used are manufactured, tested, and inspected in accordance with the requirements of referenced subsidiary specifications and standards to the extent specified, or, if none, in accordance with this specification.

4.3 Inspection of preparation for delivery requirements. An inspection shall be made to determine that the packing and marking comply with the requirements in Section 5 of this specification. Defects shall be scored in accordance with table I. The sample unit shall be one shipping container fully prepared for delivery. Sampling shall be in accordance with MIL-STD-105. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be II and the AQL shall be 4.0 defects per hundred units.

Table I. Classification of preparation for delivery defects

Examine	Defect
Markings (exterior)	Omitted; incorrect; illegible; improper size, location, sequence or method of application.
Materials	Any component missing or damaged.
Workmanship	Incomplete closure of box, loose strapping, distortion of container.

4.4 Testing procedures and tests.

4.4.1 Testing agency. Qualification tests accomplished on doors submitted for approval for inclusion on the applicable Qualified Products List (QPL) and any retesting that may be required shall be performed by a testing agency specifically designated by the General Services Administration.

4.4.2 Testing costs. All testing costs entailed in determining the qualification of the supplier's product, including costs of retesting of a qualified product if subsequently disqualified under 3.1.1., shall be borne by the supplier, and shall be payable to the General Services Administration.

4.4.3 Test procedures. The following procedures shall govern the testing of all doors submitted for qualification under this specification:

(a) Samples shall be submitted for qualification only after the supplier has obtained written authorization from the General Services Administration.

(b) A qualification test may be discontinued at the Government's testing facility at any time the product fails to meet any one or more of the requirements set forth in this specification. The manufacturer may be permitted to make modifications on the sample during the testing phase where such modifications, in the judgement of the General Services Administration and the testing facility, are clearly in the interest of the Government.

(c) In case of failure of the sample, consideration will be given to the request of the manufacturer for resubmission for retest only after it has been clearly shown that changes have been made in the product which the Government considers sufficient to warrant retest.

(d) The manufacturer or his representative will not be permitted to observe the actual tamper resistance tests conducted on his product at the testing facility. However, when samples tested fail to comply with the requirements of this specification, the sample may be examined by the manufacturer or his representatives and full details of the failure may be made known to them in a manner which, for reasons of security, will be in the best interest of the Government.

4.4.4 Test samples. A qualification test sample of the class the supplier proposes to furnish shall be forwarded at a time and to a place designated by the General Services Administration. In the event the sample is destroyed or damaged to such an extent during testing that testing cannot be completed, the Government reserves the right to require the manufacturer to furnish additional samples to complete the testing.

4.4.5 Drawings and material specifications. The manufacturer shall furnish two complete sets of construction and assembly drawings and material specifications with the sample submitted for qualification. When samples have been tested and are approved for inclusion on the applicable QPL, the manufacture shall furnish three additional complete sets of the assembly and construction drawings and material specifications lists to the General Services Administration for the Government's use in inspection and acceptance of the product after award of contract. All material so furnished by the manufacturer will be held in proprietary confidence.

4.4.5.1 Changes in drawings and material specifications. Once the door has been tested and approved for QPL, no change of any kind shall be made in its construction or in the construction drawings unless prior written authorization to make the change is obtained from the Federal Supply Service, General Services Administration.

4.4.6 Qualification testing. Qualification testing shall consist of the following tests described under Test Methods in 4.1, 4.4.9. Failure of the sample to withstand these tests shall provide reason to consider the product as having failed to meet qualification requirements.

(a) Door test - 4.4.8.1
(b) Surreptitious and forced entry test - 4.4.8.2
(c) Radiology test - 4.4.8.3
(d) Inspections - 4.1, 4.4.9

4.4.7 Acceptance after award of contract. The Government reserves the right to inspect and test each door, including all component parts thereof, delivered for acceptance under this specification after award of contract.

4.4.8 Test methods.

4.4.8.1 Door test. The vault door shall be suspended in a test frame and swung open 90 degrees from its closed position. Two hundred pounds of weight shall be loaded on the top edge of the door opposite and furthermost from the hinged side. The door shall be allowed to hang in this position for approximately 24 hours. At the end of this period the door shall be examined for ease of operation. The door shall not stick or jam in its frame and the lock and locking mechanism shall operate easily and smoothly.

4.4.8.2 Surreptitious and forced entry. There shall be sufficient time and opportunity to study the design and construction of the vault door and to develop testing methods prior to the start of the tests. There shall be no limit on the number of methods of surreptitious, covert and forced entries attempted. The man-minute working time shall cover the period during which an entry test on the cabinet is in progress and shall be exclusive of time required for safety precautions and rest periods.

4.4.8.2.1 Tools and devices.

4.4.8.2.1.1 Surreptitious entry. Tools and devices used in surreptitious entry tests are unlimited, except that the total weight of the tools used for a single test shall not exceed 150 pounds. The test tools and devices selected for a particular attempt shall be weighed prior to commencement of the test.

4.4.8.2.1.2 Covert entry. The tools and devices used in the covert entry tests shall be limited as specified below. Power tools, electrically or battery powered shall be commercially available equipment, and shall be limited to drills not exceeding 5000 rpm. Pressure rigs may be used, with a lever arm not exceeding 30 inches. Tools may be reasonably modified, i.e., special chunks on drills, ground or shaped chisels or pry bars, etc. Electrical tools shall be able to operate on electricity available in normal office space. Tools and devices shall be capable of being carried in two cases or bags, each case or bag not exceeding 1.5 cubic feet in volume. The total weight of the tools used in a single test shall not exceed 150 pounds, exclusive of the weight of the case. Devices for the application of heat shall be limited to single tank propane, butane or equivalent devices which fall with the weight

and dimension limits specified above. Acetylene, MAPP or equivalent shall not be used. Electric arc or any form of burn bars, oxidizer assisted products or explosive will not be used. The test tools and devices selected for a particular attempt shall be weighed prior to commencement of the test.

4.4.8.2.1.3 Forced entry. The tools and devices used for forced entry tests shall be limited to non-powered tools only. The test tools and devices selected for a particular attempt shall be weighed prior to commencement of the test.

4.4.8.2.2 Timing. The time clock shall be started when the test equipment is picked up to approach the sample and shall not be stopped during the test except as specified above. Any change or repair of tools taken from the carrying case during a test shall only be done while the clock is running. The tests must be conducted in a manner that is repeatable. Any surreptitious, covert, or forced entry through the vault door under the above conditions, within the time specified for the door's class, shall provide reason to consider the door as having failed to meet the requirement.

4.4.8.3 Entry by radiological techniques. The vault door shall successfully meet the following test to demonstrate resistance to entry by radiological techniques. The vault door structure shall be radiographed and the resulting radiographs shall not permit determination of the lock combination to the extent that entry is made in less than the time specified. Radioactive isotopes and other sources, of any type judged to be effective for the purpose of this test, will be used. Any effective radiation shielding provided in the vault door will be included in the test. The test is intended to simulate attempted entry within the specification limit of 150 pounds of equipment, utilizing practicable and feasible procedures and equipment available to Government testing agencies performing the tests. Any entry made under the preceding conditions within 20 man-hours shall be considered a failure of the cabinet to meet the requirements of this specification.

4.4.8.4 Finish test. The two panels, prepared as specified in 3.12.2 shall, at room temperature, be bent around a 1/4-inch rod to an angle of 180 degrees. The panels shall then be examined for compliance with 3.12.2.

4.5 Inspection. A visual inspection shall be made of the product to determine compliance with the requirements specified in Section 3.

5. PREPARATION FOR DELIVERY

5.1 Packing. Packing shall be level A, B, or C, as specified (see 6.2).

5.1.1 Level A. Each complete door shall be packed in a crate conforming to PPP-B-650 or in a box conforming to PPP-B-621. When packed in a crate the contents shall be waterproof shielded with a shroud fabricated of material conforming to PPP-B-1055, as specified for interior shrouds, and in accordance with the appendix to the crate specification. When packed in a box the contents shell be shrouded as specified herein and the box shall be modified with addition of reinforcing members and skids as specified in the box specification. The contents of the crate or box shall be blocked, braced and cushioned to prevent movement during multiple shipments.

5.1.2 Level B. Each complete door shall be packed in a crate conforming to PPP-B-650 or in a box conforming to PPP-B-621. Unless otherwise specified (see 6.2) shrouding of the contents shall not be required. The contents of the crate or box shall be blocked, braced and cushioned to prevent movement during shipment.

5.1.3 Level C. Each complete door shall be packed to assure carrier acceptance and safe delivery to destination in containers complying with rules and regulations applicable to the mode of transportation.

5.2 Marking.

5.2.1 Civil agencies. In addition to markings required by the contract or order, the shipping containers shall be marked in accordance with Fed. Std. No. 123.

5.2.2 Military activities. In addition to markings required by the contract or order, the shipping containers shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 Intended use. The doors are intended for use in storage vaults and strong-rooms to protect against the unauthorized passage of a person or persons through the doorway into the vault proper.

6.2 Ordering data. Purchasers should exercise any desired options offered herein, and procurement documents should specify the following:

(a) Title, symbol, and date of this specification.

(b) Class, type, and style required.
(c) Thickness and composition of vault wall.
(d) Levels of packing and marking required.

6.3 Qualification. With respect to products requiring qualification, awards will be made only for such products as have, prior to the time set for opening of bids, been tested and approved for inclusion on the applicable Federal Qualified Products List, whether or not such products have actually been so listed by that date. The attention of suppliers is called to this requirement, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification so that they may be eligible to be awarded contracts or orders for the products covered by this specification. The activity responsible for the Qualified Products List is Furniture Commodity Center, Federal Supply Service, General Services Administration, Washington, D.C. 20406, and information pertaining to qualification may be obtained from that activity.

6.4 Composition of vault wall. Examples of materials commonly used in vault construction are reinforced concrete, interlocked hard brick, steel alloy, or a combination of these. In order that the door manufacturer can insure a proper fit, the purchaser should stipulate in the purchase order (see 6.2) the thickness and the type of material used in the vault wall.

6.5 Definition of terms used in this specification.

6.5.1 Entry. For the purpose of this specification, entry means: (1) opening the door, (2) creating and opening to allow passage through the vault door or wall opening in which the door is mounted.

6.5.2 Surreptitious entry. For the purpose of this specification, surreptitious entry means a method of entry, such as lock manipulation or radiological attack on the combination lock, which would not be detectable during normal use or during inspection by a qualified person.

6.5.3 Covert entry. For the purpose of this specification, covert entry means a method of entry which would leave evidence, but would not be detectable by a user during normal use. The covert entry would be detectable during inspection by a qualified person.

6.5.4 Forced entry. For the purpose of this specification forced entry means a method of entry which would leave evidence of the act and which would be readily discernible in the normal use of the door. Forced entry is considered to be an attack in which the attacker has no concern over leaving evidence that the vault door has been penetrated.

6.5.5 Lock manipulation. For the purpose of this specification lock manipulation is defined as the opening of the combination lock without alteration of the physical structure or disarranging the parts. Ordinarily, manipulation would be accomplished by movement of the lock dial.

6.6 Samples. All sample doors required for test purposes shall be furnished at no expense to the Government and the manufacturer shall pay all transportation charges to and from the point where the tests are performed. All tested samples shall become the property of the Government but may be released to the manufacturer at the option of the Government. Upon request, the manufacturer shall furnish to the Government a door equal in every respect to that of the qualified sample for use of inspection during the term of contract. The door shall be furnished at no expense to the Government and will be returned to the manufacturer upon expiration of his contract.

6.7 Special techniques. Information relating to special techniques used in the testing of vault doors will be disclosed to qualified suppliers and personnel of the Federal agencies on an official need to know basis.