

A-A-700A  
February 23, 1983  
SUPERSEDING  
A-A-700  
November 27, 1979

## COMMERCIAL ITEM DESCRIPTION

### CHAIR, SHELL, ROTARY, HIGH BACK

The General Services Administration has authorized the use of this commercial item description in preference to type I high back chairs of Interim Federal Specification AA-C-001771C.

#### Salient characteristics:

Design. The high back shell chair shall be designed for heavy duty office use and have the contemporary style and appearance illustrated in Figure 1. The chair shall swivel with continuous seat rotation; have a tilting seat and back with adjustable tilt tension; and have continuous seat height adjustment. The chair shall have arms, a base with casters and padding covered with fabric upholstery which does not overlap or cover the outer shell. Tufting is optional.

Dimensions. The dimensions shall be as listed below:

1. Seat depth - 17 in minimum.
2. Seat width - 19 in minimum.
3. Back height - 20 in minimum.
4. Width between arms - 19 in minimum.
5. Overall height - 36 in minimum (chair adjusted to lowest height).
6. Seat height shall include the range between 18 in to 20 in.

Casters. The casters shall be replaceable stem and socket type with a ball bearing swivel. Wheel diameter shall be  $2\frac{1}{4}$  in (6.4 cm). Material for the tread shall be either rubber or plastic with a Shore durometer D scale hardness of 35 to 50 at 70°F (21.1°C). The wheel bearing shall be self lubricating. The casters shall have a corrosion resistant finish compatible with the appearance of the chair base. The bottom of the chair seat shall be clearly and permanently marked with information indicating where replacement casters of the same type used on these chairs can be obtained.

Base. The chair base shall be slim, contemporary style of either four or five leg design. The base shall be fabricated from steel or aluminum. Steel bases shall be satin chrome plated and aluminum bases shall be satin finished. The finish on both bases shall cover all or a major portion of the exposed surface and be similar in appearance to Government standard sample FSS-M-01001.

Shell(s). The chair seat and back shall consist of a one-piece outer shell of either single or double shell design. Material for the shell(s) shall be either molded plastic or steel. The exposed surface of the outer shell shall be colored black or slate gray with a textured finish. There shall not be any openings or holes in the back of the outer shell.

Arms. The arms shall be open. Plastic shall be colored black. Exposed metal shall have an attractive corrosion resistant finish colored black or satin chrome plated similar in appearance to Government standard sample FSS-M-01001. The arms shall not be upholstered.

A-A-700A

Padding. Material for the upholstery padding shall be unfilled, high resilient polyurethane foam and shall comply with the requirements in the table below. The padding shall provide a comfortable, proper fitting and durable seat and back. The padding shall be firmly secured to prevent unintentional removal or displacement from its intended position while in use.

Physical properties of slab and molded unfilled, high resilient polyurethane foam in accordance with ASTM D 3574.

Property	Low density	Medium density	High density
Indentation Force Deflection - Specified Deflection, 25 percent (lb)	14 - 31	31 - 37	37 - 64
Indentation Force Ratio (65 percent/25 percent) minimum	1.8	1.9	1.9
Constant Deflection Compression Set 22 hr/158° F, deflected to 10 percent of its thickness, percent maximum	20 percent	15 percent	15 percent
Static fatigue at constant deflection, 25 percent indentation force loss, percent maximum	30 percent	30 percent	25 percent
Maximum thickness loss	5 percent	5 percent	5 percent
Density (lb/cu ft)	1.4 minimum	2.7 - 3.4	2.7 - 4.8

Upholstery fabric. The upholstery fabric shall be 100 percent flat nylon, dyed, plain weave, not less than 21 oz/linear yd (651 g/linear m), based on 54 in (137 cm) width, exclusive of back coating. The fabric shall conform with Table I of ASTM D 3597 except: minimum breaking strength shall be 250 lb (1112 N) for warp and filling; minimum tear strength shall be 20 lb (89 N) for warp and filling; and the surface abrasion test shall be the Rotary Platform, Double-Head Method using the Taber Abraser (CS #10 wheels, 500 g load) in accordance with ASTM D 1175 for 8,000 cycles without a complete breakthrough of a yarn. Seam efficiency shall be not less than 80 percent when tested in accordance with method 5110 of Federal Test Method Standard 191. The fabric shall be securely fastened to prevent unintentional removal.

Fabric colors. The fabric colors shall match the following Government standard samples:

Blue/Black	FSS-F-01005	Black/White	FSS-F-01014
Black	FSS-F-01009	Sand/White	FSS-F-01015
Orange/Rust	FSS-F-01011	Green/Black	FSS-F-01016
Black/Brown	FSS-F-01012	Yellow/Gold	FSS-F-01018
Red/Black	FSS-F-01013		

A-A-700A

Chair controls. Seat height adjustment range shall be not less than 2½ in (6.4 cm). The seat and back shall tilt not less than 16 degrees nor more than 24 degrees. Seat height adjustment and tilt tension adjustment shall be easily accomplished. The seat height shall not change unintentionally when occupied. Hardware used for the chair controls shall be modern contemporary design with an attractive corrosion resistant finish. The height adjusting mechanism shall be warranted for a period of five (5) years against defects in material or workmanship with repair or replacement made at no cost to the Government.

Adjustment instructions. Instructions shall be attached to the chair which clearly illustrates where the seat height and tilt tension adjustments are located and how these adjustments are accomplished.

Identification marking. The bottom of the chair seat shall be clearly and permanently marked with the following information: manufacturer's name or trademark, contract or order number, national stock number, and month and year of manufacture.

Safety features. The tilting mechanism shall have a positive tilt stop in case of failure. The seat shall not separate from the base during seat raising; the seat shall be securely attached to the base when adjusted to the maximum seat height; and the seat shall be incapable of unintentional separation from the base. There shall not be any defects or conditions that in any way could be hazardous to personnel or their clothing.

Workmanship. There shall not be any defects or conditions that impair appearance, function, serviceability, comfort or durability of the chair. The chair shall be neatly upholstered with an attractive finished appearance. There shall not be any gaps between the upholstery and the outer shell around the entire perimeter. Movable parts shall be properly lubricated to prevent wear and annoying noise. All exposed metal shall have an attractive corrosion resistant finish.

Performance tests. The chair shall pass the following tests:

- (1) The tests in ANSI X5.1-1977 and Amendment X5.1a-1979 listed below.

#### ANSI X5.1-1977 TESTS

---

4. Back Pull Test
7. Base Test
8. Drop Test
9. Swivel Cycling Test
10. Tilt Mechanism Test
11. Seating Impact Test  
(Cyclic)
12. Stability Test - Use test in ANSI X5.1a-1979 for Type II chairs.
13. Arm Strength Test
14. Arm Strength Test
15. Back Durability Test
17. Caster Durability Test - Use obstacle course for 36,000 cycles with one  
caster failure allowed before 20,000 cycles and  
two caster failures allowed before 36,000 cycles.

A-A-700A

(2) Chromium plating test. (Only applicable to chairs having chromium plating.) Plated samples shall be tested for corrosion in accordance with the 5 percent neutral salt spray at 95°F (35.0°C) in accordance with ASTM B 117. The test period shall be not less than 48 hours. After the specified exposure is completed, the specimen shall be visually examined to assure that the plating shows no evidence of peel, chip, uneven color, powder film, pits or stain. Widely scattered spots of corrosion are permitted, however, none of these spots shall exceed 1/16 in (1.6 mm) along the greatest dimension.

Regulatory requirement. The offeror/contractor is encouraged to use recovered materials in accordance with Public Law 94-580 to the maximum extent practical.

Preservation, packaging, packing, labeling, and marking. The preservation, packaging, packing, labeling, and marking shall be as specified in the solicitation.

Notes:

Purchasers should specify upholstery color.

ANSI Standards are available from the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.

ASTM Standards are available from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

Government standard color samples are available from the Engineering Division, Furniture Commodity Center, Office of Federal Supply and Services, General Services Administration, Washington, DC 20406.

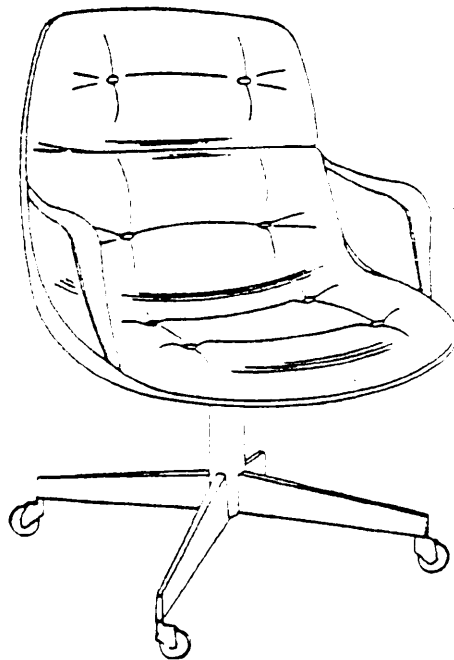


Figure 1