

A-A-50359A  
12 June, 1984  
Superseding  
A - A - 5 0 3 5 9  
26 July 1982

## COMMERCIAL ITEM DESCRIPTION

### SHOES, CONDUCTIVE

The Navy Clothing and Textile Research Facility has authorized the use of this commercial item description in preference to MIL-S-3794E.

#### Salient Characteristics

The style of the shoe shall be a plain toe blucher oxford of welt construction. The upper shall be dark brown grainout cattlehide with vamp and quarter linings. The leather used for the upper shall be free from defects and damages as described herein. The shoes shall have steel safety box toes, completely coated with a non-ferrous material, and shall conform to class 75 of ANSI Z41.1 American National Standards for Men's Safety - Toe Footwear for which permanent labeling or marking is required in each shoe as per Section 5 of ANSI Z41.1 - 1983/75. Steel or fiberglass shanks, smooth tread rubber soles and heels and conductive sock linings are also required. The shoes shall have no metal parts except for the box toes, shanks, eyelets, assembly tacks or staples, and copper contact nails used to create a conductive path. Heels shall be attached without the use of nails. Components and materials used to make the shoes and the path constructed between the sock lining and the sole and heel shall be adequately conductive for the finished shoes to provide resistance to a maximum of 250,000 ohms (see requirements for testing). The manufacturer shall submit a certificate of compliance for the resistance requirement.

The shoes shall be constructed in accordance with standard industry practice and correctly mated.

The shoes shall be in the following industry standard sizes and widths:

4 to 15 in whole and half sizes in 5 widths (extra narrow to extra wide).

Shoes shall be furnished with brown nylon or cotton laces of the appropriate length for each size.

#### Testing

Each finished shoe shall be tested for electrical resistance on a Vibrotester Meg-check Model 2269 of Associated Research Inc., 8221 North Kimball Avenue, Skokie, IL 60076, or an equivalent instrument. Shoes exceeding the maximum allowable resistance are not acceptable.

Quality Assurance Provisions

Critical Defects. The contractor shall perform 100 percent inspection of the finished shoes for the critical defects listed below. Any shoe found with one or more of the defects shall result in rejection.

- a. Steel toe missing
- b. Protruding part of tack or nail forward of heel breastline.

Major and Minor Defects. Sampling and end item inspection shall be in accordance with MIL-STD-105. The inspection level shall be Level I and the AQL's shall be 2.5 for Major and 6.5 for total. The lot size shall be expressed in units of one finished shoe and selection shall be by pairs. During the manufacturing process, the manufacturer shall remove parts with defective materials and workmanship damages and replace with non-defective components. Major type defects are as follows:

- a. Not properly mated, i.e., not left and right of same size.
- b. Leather damages (scratches, slaughter cuts, cuts on grain surface, pronounced veins, etc.).
- c. Torn or excessively full linings.
- d. Materials not as specified.
- e. Construction not in accordance with standard industry practice.
- f. Broken upper stitches not repaired.
- g. Separation of any bottom component.
- h. Protruding tack, staple, or nail in heel area.
- i. ANSI label missing. 1/
- j. Grinning seams.

Minor defects shall be classified as follows:

- a. Variation in color.
- b. Any spot or stain.
- c. Excessively loose or tight thread tension.
- d. Any open seam.
- e. Gauge of stitching irregular.
- f. Heels or soles not finished square.
- g. Crooked heels.
- h. Strained seams.
- i. Label incomplete, not legible.
- j. Upper leather defects (scars, veins, fat wrinkles, pipey, stretchy, excessive break, etc.).
- k. Rolled or curled counter.

During sampling inspection, in accordance with MIL-STD-105, Major and Minor Defects, any critical defect found shall result in rejection of the entire lot.

1/ When this defect is found, the defect shall be scored and the item shall be rejected, replaced or excluded from the lot.

Packaging and Packing

Each correctly mated pair of shoes shall be wrapped in a sheet of commercial grade tissue paper and placed in a fiberboard shoe box in accordance with standard industry practice. An instruction sheet or tag shall be furnished with each pair of shoes to inform the user of the following requirements:

- a. Wear shoes with cotton socks for best conductivity.
- b. Test shoes for required conductivity when issued.
- c. Test shoes at least once every month thereafter to ensure electrical resistance does not exceed the allowable limit.
- d. If excessive resistance is indicated, clean and retest shoes. Do not use shoes if not within the allowable limit for electrical resistance.

Shoe boxes shall be marked with a description of contents, including correct size and width.

Twelve shoe boxes with shoes of one size and width only shall be packed in a snug-fitting, grade 275, Style RSC, type CF double wall, domestic class fiberboard shipping container conforming to Federal Specification PPP-B-636 and closed in accordance with Method II of the specification appendix. The approximate dimensions of the container shall be 30 X 14-1/2 X 13 inches. Marking shall be as specified in the contract.

Notes

Conductive shoes are intended to be worn by personnel in ordnance or ammunition plants, or other places where the accumulation of static electricity in the body of the wearer constitutes a hazard because of the possibility of its sudden discharge in the form of a spark which may ignite sensitive explosives, gas mixtures or flammable vapors. The effectiveness of the shoes is dependent on a low resistance conductive path between the wearer and the heel and sole of the shoe, and sufficiently conductive floors.

MILITARY INTERESTS:

PREPARING ACTIVITY:

Custodians

Navy - NU

Navy - NU  
Air Force - 99

Project No. 8430-0345

Review Activities

Navy - OS  
Air Force - 11, 99  
DLA - CT

User Activity

Air Force - 45

