

A-A-132A  
 November 7, 1988  
 SUPERSEDING  
 A-A-132  
 April 5, 1980

## COMMERCIAL ITEM DESCRIPTION

### ERASERS

The General Services Administration has authorized the use of this commercial item description as a replacement for Federal Specification ZZ-E-661 which is cancelled.

#### 1. Salient Characteristics

Erasers shall comply with the criteria specified in Table I and shall erase satisfactorily for the purpose intended under normal erasing conditions.

Durometer Hardness. Erasers shall be of the hardness specified in Table II when tested in accordance with ASTM D 2240. For cylindrical erasers (Item Nos. 1,2,7,8,9,13 & 15), erasers shall be tested in accordance with the test procedures stated in section 4.

Durometer Hardness After Accelerated Aging. The erasers shall be tested and evaluated after accelerated aging in accordance with the test procedures stated in section 4.

Workmanship. Erasers shall be uniform in quality, smooth and free of dirt, foreign matter, and stains or any ingredient which causes a discoloration or marking of the paper upon which erasure is performed.

#### 2. Tables

Table I.

Item No.	Purpose, type and shape	Descriptive dimensions Minimum (in.)	Minimum Volume (cubic in.)	Other Characteristics
1	Pencil; soft; cylindrical	1-1/4 (long); 0.300 (dia.)	0.088	Designed for use in electric erasing machines. *
2	Pencil; regular; cylindrical	6 (long); 3/16 (dia.); eraser core	0.166	Paper-cased, wood-cased or plastic holder. *
3	Pencil; regular; rectangular	2-3/4 x 3/4 x 1/4	0.547	Beveled ends.

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Table I

Item No.	Purpose, type and shape	Descriptive dimensions Minimum (in.)	Minimum Volume (cubic in.)	Other Characteristics
4	Pencil; regular; conical or arrow head, wedge or chisel shaped	-----	-----	Eraser fits over end of standard writing pencil (9/32 inch dia. ferrule).
5	Pencil; regular; mechanical pencil replacement eraser	-----	-----	Eraser must fit Scripto's Long Lead Mechanical Pencil K-770.
6	Pencil; regular; mechanical pencil replacement eraser	-----	-----	Eraser must fit Auto-point's Slim Utility Mechanical Pencil # 106.
7	Typewriter and ink; cylindrical	2-23/32 (long); 0.120 (dia.)	0.031	Designed for use in mechanical eraser barrels. #
8	Typewriter and ink; cylindrical	1-1/4 (long); 0.300 (dia.)	0.088	Designed for use in electric erasing machines. *
9	Typewriter and carbon; cylindrical	6 (long); 3/16 (dia.) eraser core	0.166	One end (half) typewriter eraser and one end (half) carbon eraser; wood-cased. *
10	Cleaning; rubber; rectangular	2 x 7/8 x 3/4	1.50	-----
11	Cleaning; rubber substitute; rectangular	2-1/4 x 1-1/8 x 1-1/8	2.848	Gum-type composition.
12	Cleaning; kneaded rubber; rectangular	1-5/8 x 1-3/16 x 3/8	0.762	-----
13	Cleaning; direct image paper offset master; cylindrical	7 (long); 3/16 (dia.) eraser core	0.193	Paper-cased; wood-cased or plastic holder. *
14	Cleaning; plastic; drafting paper, films and vellums; rectangular	2-1/4 x 7/8 x 7/16	0.95	Beveled ends.

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Table I

Item No.	Purpose, type and shape	Descriptive dimensions Minimum (in.)	Minimum Volume (cubic in.)	Other Characteristics
15	Cleaning; plastic; drafting paper, films and vellums; cylindrical	6-1/4 (long); 0.290 (dia.); eraser core	0.413	Paper-cased; wood-cased or plastic holder. *

Note - All dimensions are minimum, except:

\* - minus tolerance of 0.020 inches is allowed for the diameter.

# - minus tolerance of 0.005 inches is allowed for the diameter.

Table II

Purpose and Type	Hardness	
	Minimum	Maximum
Pencil:		
Soft	30	50
Regular	50	70
Typewriter, Ink & Carbon:		
Typewriter	70	85
Ink	75	90
Carbon	60	75
Cleaning:		
Rubber	25	50
Rubber Substitute	30	40
Kneaded rubber	—	—
Direct-image paper offset master	55	70
Drafting paper, films and vellums	42	52

### 3. Quality Assurance

Each lot of erasers shall be inspected for conformance to the requirements herein. Inspection shall be in accordance with MIL-STD-105D using the sampling plans specified below.

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Visual and Dimensional Characteristics. - Inspection Level II with an Acceptable Quality Level (AQL) of 4.0 percent defective. The sample unit shall be one eraser.

Tests. - Inspection Level S-2 with an AQL of 4.0 percent defective, for each test. The sample unit shall be one eraser.

Packaging, Packing, and Marking. - Inspection Level S-2 with an AQL of 4.0 percent defective. The sample unit shall be one fully prepared shipping container.

#### 4. Tests

Durometer Hardness for Cylindrical Erasers (Item Nos. 1,2,7,8,9,13 & 15 as applicable)

Preparation of specimens for test. Eraser units shall be taken at random from each lot for preparation of test-unit specimens, in accordance with the sampling plan listed in section 3, for test as specified in the paragraph below. (A lot shall consist of all erasers of the size offered for delivery at one time.) Cased and noncased cylindrical erasers not cut square or if cone shaped at the end shall be squared transverse to the longitudinal axis of the eraser (NOTE. Any unevenness of the test surface of the eraser will cause an inaccurate reading.) Specimens of double-end wood-cased eraser units shall be prepared at each end of the eraser unit.

Method of test. A shore durometer, type 2, Code XACL Modified with sleeve as detailed in Figure I, shall be used in making the hardness determination for cylindrical erasers. Durometer and sleeve may be mounted on wooden sleeve (See Figure II). Each eraser unit shall be prepared as described in the above paragraph. Insert cased erasers into sleeve and with normal pressure push eraser until it is flat against base of gauge. Indentation reading shall be taken immediately. Uncased erasers shall be inserted in tubing or in an eraser holder, or by other adequate means, in a manner that the eraser will not creep or slide down when inserted in sleeve for hardness test. Hardness determination shall be made and the value recorded to the nearest whole scale unit.

Results. The hardness of the test unit shall be recorded to the nearest whole scale reading. (NOTE: For definitions of terms see ASTM D 1566)

Accelerated Aging. Erasers shall be exposed in circulating air as described in ASTM method D 573 or D 865. After the aging, the erasers shall then be examined. The hardness of the erasers shall not increase by more than 12 points and shall also erase satisfactorily under normal usage conditions.

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#### 4. Preparation for delivery

##### Packaging, Packing & Marking

Packaging, packing and marking of the erasers shall be as specified in the contract or purchase order.

5. Application for copies of technical documents referenced herein: The issue date in effect on date of invitation for bids or request for proposal shall be apply.

##### Military Specifications:

MIL-STD-105 - Sampling Procedures and Table for Inspection by Attributes

Available from Naval Publications and Forms Center; 5801 Tabor Avenue; Philadelphia, PA 19120.

##### American Society for Testing and Materials (ASTM):

ASTM D 573 - Standard Test Method for Rubber - Deterioration in an Air Oven

ASTM D 865 - Standard Test Method for Rubber - Deterioration by Heating in Air (Test Tube Enclosure)

ASTM D 1566 - Standard Terminology Related to Rubber

ASTM D 2240 - Rubber Property-Durometer Hardness, Test Method for

Application for copies should be addressed to the American Society for Testing and Materials; 1916 Race Street; Philadelphia, PA 19103.

#### 6. Recovered materials

The manufacturer shall utilize recovered materials to the maximum extent practicable.