INCH-POUND

A-A-3192A
April 28, 2010
SUPERSEDING
A-A-3192
May 9, 2003

COMMERCIAL ITEM DESCRIPTION

BRUSHES, PAINT

The General Services Administration has authorized the use of this commercial item description by all federal agencies.

1. SCOPE. This commercial item description covers flat, metal-bound, paint and varnish brushes made with natural hog bristle or synthetic filament. Master grade brushes are designed and manufactured for paint applications where superior paint loading and release are required. High grade brushes are for varnish and enamel applications. Medium grade brushes are excellent as sash and trim tools. Utility grade brushes deliver excellent results in general purpose painting operations where brush strokes are not a consideration.

2. CLASSIFICATION. The brushes shall be of the following types, classes, and sizes (Size denotes width or diameter and length of bristle outside of ferrule).

Grade AA, Master Grade	Type I – Hog Bristle Size, mm (inches)	Type II – Synthetic Filament Size, mm (inches)
	152 (6)	127 (5)
	127 (5)	102 (4)
	102 (4)	89 (3-1/2)
	89 (3-1/2)	76 (3)
Grade A, High Grade	152 (6)	152 (6)
	127 (5)	127 (5)
	102 (4)	102 (4)
	89 (3-1/2)	89 (3-1/2)

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any other data which may improve this document should be sent to: General Services Administration, Federal Supply Service, Heartland Supply Operations Center (QDSKCB), 1500 E Bannister Rd., Kansas City, Missouri, 64131

FSC 8020

Grade A, High Grade	Type I – Hog Bristle Size, mm (inches)	Type II – Synthetic Filament Size, mm (inches)
	76 (3)	76 (3)
	64 (2-1/2)	64 (2-1/2)
	51 (2)	51 (2)
	38 (1-1/2)	38 (1-1/2)
	25 (1)	25 (1)
Grade B, Medium Grade	127 (5)	127 (5)
	102 (4)	102 (4)
	89 (3-1/2)	89 (3-1/2)
	76 (3)	76 (3)
	64 (2-1/2)	64 (2-1/2)
	51 (2)	51 (2)
	38 (1-1/2)	38 (1-1/2)
	25 (1)	25 (1)
Grade C, Utility Grade	102 (4)	102 (4)
	89 (3-1/2)	89 (3-1/2)
	76 (3)	76 (3)
	64 (2-1/2)	64 (2-1/2)
	51 (2)	51 (2)
	38 (1-1/2)	38 (1-1/2)
	25 (1)	25 (1)
	13 (1/2)	---

3. SALIENT CHARACTERISTICS

3.1 Design and construction – Brushes made with natural hog bristle (Type I) are recommended for application of solvent borne paints and coatings. Brushes made with synthetic filaments (Type II) are recommended for application of water borne paints and coatings. The brushes shall consist of a handle with hair held in place by means of a ferrule and setting compound.

3.2 Hog Bristle (Type I) – The bristle Type I shall be unbleached and undyed natural hog bristle. The bristle shall be boiled or steamed and straightened so that it will not twist or curl, and shall be free from reconditioned bristle or adulterants.

3.3 Synthetic filaments (Type II) - The synthetic filaments for Type II brushes shall be an organic polymeric material, tapered filaments meeting the size designation of Table 2.

3.4 Ferrule - The ferrule shall be made of corrosion resistant metal, or metal made corrosion resistant by electro-plating. The ferrule metal shall have minimum wall thickness of 3 mm (0.010 inch). The ferrule shall be formed with and interlock, lock-seamed, soldered, or welded end lap, and shall have a groove at the base to aid in controlling the flow of the setting compound. The ferrule height shall be a minimum of 32 mm (1-1/4 inch) for grade C brushes and 37 mm (1-15/32 inch) minimum for grade AA, A, and B brushes.

3.5 Assembly – For grades AA and A brushes, the ferrule shall be fastened to the handle with 16 or 17 gage corrosion resistant nails. The minimum length of the nails shall be such that the shank of the nail shall engage at least ½ the thickness of the brush. There shall be at least two (2) nails on each side of brushes 76 mm (3 inches) wide or smaller. There shall be on each side of the 89 mm (3-1/2 inch) and 102 mm (4 inch) brushes. Four (4) nails shall be on each side of the brush. For grade B and C brushes, the ferrules may be nailed or otherwise securely fastened to the handles.

3.6 Handle – The handle shall be either a smoothly finished close-grained hardwood, or synthetic material with all sprues and runners removed.

3.7 Filler Strips – Filler strips shall be made of wood, metal, or plastic.

3.8 Trim –

(a) All grade AA brushes shall be formed to square top with flagged ends preserved, or cup chiseled, with a minimum chisel of 6 mm (1/4 inch).

(b) Grade A and B brushes wider than 76 mm (3 inches) and all grade C brushes shall be formed to a square top, with tipping and flagging preserved.

(c) 76 mm (3 inch) brushes shall be formed to a square top (with the tipped or flagged ends preserved), or cupped or machined to a chisel edge with a minimum chisel of 6 mm (1/4 inch). (If cup chiseled, flagged ends shall be preserved. If machine chiseled, the ends shall be sanded to a fine, soft edge).

(d) Grade A and B brushes (less than 76 mm [3 inches] wide) shall be cupped or machined to a chisel edge with a minimum chisel of 6 mm (1/4 inch). (If cup chiseled, flagged ends shall be preserved. If machine chiseled, the ends shall be sanded to a fine, soft edge).

3.9 Composition and Physical Requirements

3.9.1 Type I – The bristle shall be 60 percent top size and blended in accordance with Table 1. (Dressed bristle described as 60 percent top size, denotes that bundle consists of 60 percent bristle measuring 2 mm (1/16 inch) or more above the length specified to 3 mm (1/8 inch) below the length specified; 30 percent to consist of bristle from 3 mm (1/8 inch) to 10 mm (3/8 inch) below the length specified; 10 percent will be 10 mm (3/8 inch) to not more than 13 mm (1/2 inch) below specified length, but including a few unavoidable shorts).

Table 1. Blend of Bristle and Physical Requirements for Type I Brushes

Grade	Brush width inside ferrule mm (inch), +/- 1 mm (1/32 inch)	Percentage (wt.) and length of bristle mm (inch) minimum	Brush thickness inside ferrule mm (inch), +/- 1 mm (1/32 inch)	Bristle length outside ferrule mm (inch), minimum	Bristle weight per brush, gm, minimum
AA	152 (6) [square or cup]	80% 133 (5-1/4) 10% 127 (5) 10% 114 (4-1/2)	25 (1)	119 (4-11/16)	153
AA	127 (5) [square or cup]	80% 133 (5-1/4) 10% 127 (5) 5% 121 (4-3/4) 5% 114 (4-1/2)	25 (1)	127 (5)	128
AA	102 (4) [square or cup]	80% 127 (5) 10% 121 (4-3/4) 5% 114 (4-1/2) 5% 108 (4-1/4)	25 (1)	113 (4-7/16)	100
AA	89 (3.5) [square or cup]	80% 121 (4-3/4) 10% 114 (4-1/2) 5% 108 (4-1/4) 5% 102 (4)	25 (1)	106 (4-3/16)	82
A	152 (6) [square]	80% 121 (4-3/4) 10% 114 (4-1/2) 5% 108 (4-1/4) 5% 102 (4)	25 (1)	106 (4-3/16)	125
A	127 (5) [square]	80% 121 (4-3/4) 10% 114 (4-1/2) 5% 108 (4-1/4) 5% 102 (4)	25 (1)	106 (4-3/16)	105
A	102 (4) [square]	80% 114 (4-1/2) 10% 108 (4-1/4) 5% 102 (4) 5% 95 (3-3/4)	25 (1)	100 (3-15/16)	79
A	89 (3.5) [square]	80% 114 (4-1/2) 10% 102 (4) 5% 95 (3-3/4) 5% 89 (3-1/2)	25 (1)	100 (3-15/16)	65
A	76 (3) [square]	80% 95 (3-3/4) 15% 89 (3-1/2) 5% 83 (3-1/4)	21 (13/16)	78 (3-1/16)	60
A	64 (2.5) [chisel]	80% 89 (3-1/2) 15% 83 (3-1/4) 5% 76 (3)	21 (13/16)	71 (2-13/16)	40
A	51 (2) [chisel]	80% 83 (3-1/4) 15% 76 (3) 5% 70 (2-3/4)	19 (3/4)	65 (2-9/16)	27

A	38 (1.5 [chisel]	80% 83 (3-1/4) 15% 76 (3) 5% 70 (2-3/4)	18 (11/16)	59 (2-5/16)	16
B	127 (5) [square]	80% 114 (4-1/2) 10% 108 (4-1/4) 5% 102 (4) 5% 95 (3-3/4)	22 (7/8)	100 (3-15/16)	96
B	102 (4) [square]	80% 102 (4) 10% 95 (3-3/4) 5% 89 (3-1/2) 5% 83 (3-1/4)	22 (7/8)	87 (3-7/16)	68
B	89 (3.5) [square]	80% 95 (3-3/4) 10% 89 (3-1/2) 5% 83 (3-1/4) 5% 76 (3)	22 (7/8)	81 (3-3/16)	57
B	76 (3) [square]	80% 89 (3-1/2) 10% 83 (3-1/4) 5% 76 (3) 5% 70 (2-3/4)	18 (11/16)	75 (2-15/16)	45
B	76 (3) [chisel]	80% 83 (3-1/4) 15% 76 (3) 5% 70 (2-3/4)	18 (11/16)	65 (2-9/16)	40
B	64 (2.5) [chisel]	80% 83 (3-1/4) 15% 76 (3) 5% 70 (2-3/4)	16 (5/8)	59 (2-5/16)	27
B	51 (2) [chisel]	100% 70 (2-3/4)	14 (9/16)	53 (2-1/16)	17
B	38 (1.5) [chisel]	100% 64 (2-1/2)	13 (1/2)	46 (1-13/16)	11
B	25 (1) [chisel]	100% 64 (2-1/2)	11 (7/16)	46 (1-13/16)	6
C	102 (4) [square]	80% 89 (3-1/2) 10% 83 (3-1/4) 5% 76 (3) 5% 70 (2-3/4)	22 (7/8)	75 (2-15/16)	54
C	89 (3.5) [square]	80% 83 (3-1/4) 10% 76 (3) 5% 70 (2-3/4) 5% 64 (2-1/2)	22 (7/8)	68 (2-11/16)	45
C	76 (3) [square]	80% 76 (3) 10% 70 (2-3/4) 5% 64 (2-1/2) 5% 57 (2-1/4)	18 (11/16)	62 (2-7/16)	37
C	76 (3) [square]	100% 70 (2-3/4)	13 (1/2)	49 (1-15/16)	28
C	51 (2) [square]	100% 51 (2)	8 (5/16)	33 (1-5/16)	5
C	40 (1.5) [square]	100% 64 (2-1/2)	10 (13/32)	33 (1-5/16)	10
C	25 (1) [square]	100% 64 (2-1/2)	8 (5/16)	33 (1-5/16)	3
C	0.5 (13) [square]	100% 51 (2)	6 (1/4)	33 (1-5/16)	2

Bristles 133 mm (5-1/4 inch) through 127 mm (5 inch) shall be 10% soft, 20% medium, and 70% stiff. Bristles 121 mm (4-3/4 inch) through 114 mm (4-1/2 inch) shall be 10% soft, 20% medium and 79% stiff. Bristles 108 mm (4-1/4 inch) through 102 mm (4 inch) shall be 25% soft, 30% medium and 45% stiff. Bristles 95 mm (3-3/4 inch) shall be 40% soft, 30% medium, and 30% stiff. Bristles 89 mm (3-1/2 inch) shall be 50% soft, 25% medium, and 25% stiff. Bristles 83 mm (3-1/4 inch) through 76 mm (3 inch) shall be 80% soft and 20% medium. Bristles shorter than 76 mm (3 inches) shall be 100% soft. (A tolerance of plus or minus 3% is allowed for each length and stiffness specified.)

3.9.2 Type II – Synthetic filament conforming to 3.3 shall be blended as specified in table 2, with a tolerance of plus or minus 3 percent for each length and stiffness specified.

Table 2. Blend of Filament and Physical Requirements for Type II Brushes

Grade	Brush width inside ferrule mm (inch), +/- 1 mm (1/32 inch) [Trim]	Filament size designation, percentage, length mm (in, min)	Length of filament out-side ferrule, mm (in, min)	Brush thickness inside ferrule mm (in.), min.	Filament weight per brush gm., min.
AA	127 (5) [square or chisel]	**12-8:** 40% 121 (4-3/4) **15-10:** 15% 121 (4-3/4) 15% 114 (4-1/2) 15% 108 (4-1/4) 15% 102 (4)	106 (4-3/16)	25 (1)	130
AA	102 (4) [square or chisel]	**12-8:** 40% 121 (4-3/4) **15-10:** 15% 121 (4-3/4) 15% 114 (4-1/2) 15% 108 (4-1/4) 15% 102 (4)	106 (4-3/16)	25 (1)	105
AA	76 (3) [square or chisel]	**12-8:** 55% 114 (4-1/2) **15-10:** 15% 102 (4) 15% 95 (3-3/4) 15% 89 (3-1/2)	98 (3-13/16)	25 (1)	74
A	152 (6) [square]	**12-8:** 45% 114 (4-1/2) **15-10:** 10% 114 (4-1/2) 15% 108 (4-1/4) 15% 102 (4) 15% 95 (3-3/4)	100 (3-15/16)	25 (1)	145
A	127 (5) [square]	**12-8:** 45% 114 (4-1/2) **15-10:** 10% 114 (4-1/2) 15% 108 (4-1/4) 15% 102 (4) 15% 95 (3-3/4)	100 (3-15/16)	25 (1)	116
A	102 (4) [square]	**12-8:** 55% 108 (4-1/4) **15-10:** 15% 102 (4) 15% 95 (3-3/4) 15% 89 (3-1/2)	94 (3-11/16)	25 (1)	88

A	89 (3.5) [square]	**12-8:** 55% 102 (4) 15% 95 (3-3/4) **15-10:** 15% 89 (3-1/2) 15% 83 (3-1/4)	87 (3-7/16)	25 (1)	77
A	76 (3) [square]	**12-8:** 55% 95 (3-3/4) 15% 89 (3-1/2) 15% 83 (3-1/4) **15-10:** 15% 76 (3)	81 (3-3/16)	25 (1)	68
A	76 (3) [chisel]	**12-8:** 40% 95 (3-3/4) 20% 89 (3-1/2) 20% 83 (3-1/4) **9-5:** 20% 95 (3-3/4)	78 (3-1/16)	21 (13/16)	54
A	64 (2.5) [chisel]	**12-8:** 20% 89 (3-1/2) 20% 83 (3-1/4) 20% 76 (3) **9-5:** 40% 89 (3-1/2)	71 (2-13/16)	21 (13/16)	45
A	51 (2) [chisel]	**12-8:** 10% 83 (3-1/4) 20% 76 (3) 20% 70 (2-3/4) **9-5:** 50% 83 (3-1/4)	65 (2-9/16)	19 (3/4)	35
A	38 (1.5) [chisel]	**12-8:** 20% 70 (2-3/4) 20% 64 (2-1/2) **9-5:** 60% 76 (3)	59 (2-5/16)	18 (11/16)	18
B	127 (5) [square]	**12-8:** 45% 114 (4-1/2) **15-10:** 10% 114 (4-1/2) 15% 108 (4-1/4) 15% 102 (4) 15% 95 (3-3/4)	98 (3-7/8)	22 (7/8)	102
B	102 (4) [square]	**12-8:** 55% 102 (4) 15% 95 (3-3/4) **15-10:** 15% 89 (3-1/2) 15% 83 (3-1/4)	86 (3-3/8)	22 (7/8)	74
B	89 (3.5) [square]	**12-8:** 55% 95 (3-3/4) 15% 89 (3-1/2) 15% 83 (3-1/4) **15-10:** 15% 76 (3)	79 (3-1/8)	22 (7/8)	60

B	76 (3) [square]	**12-8:** 55% 89 (3-1/2) 15% 83 (3-1/2) 15% 76 (3) 15% 70 (2-3/4)	73 (2-7/8)	22 (7/8)	48
B	76 (3) [chisel]	**12-8:** 20% 70 (2-3/4) 20% 76 (3) 10% 83 (3-1/4) **9-5:** 50% 83 (3-1/4)	49 (1-15/16)	18 (11/16)	42
B	64 (2.5) [chisel]	**12-8:** 20% 64 (2-1/2) 20% 70 (2-3/4) **9-5:** 60% 76 (3)	59 (2-5/16)	16 (5/8)	30
B	51 (2) [chisel]	**12-8:** 30% 64 (2-1/2) **9-5:** 70% 70 (2-3/4)	52 (2-1/16)	14 (9/16)	20
B	38 (1.5) [chisel]	**9-5:** 30% 57 (2-1/4) 70% 64 (2-1/2)	46 (1-13/16)	13 (1/2)	13
B	25 (1) [chisel]	**9-5:** 30% 57 (2-1/4) 70% 64 (2-1/2)	46 (1-13/16)	11 (7/16)	6
C	102 (4) [square]	**12-8:** 55% 89 (3-1/2) 15% 83 (3-1/4) 15% 76 (3) 15% 70 (2-3/4)	75 (2-15/16)	22 (7/8)	54
C	89 (3.5) [square]	**9-5:** 25% 83 (3-1/4) **12-8:** 30% 83 (3-1/4) 15% 76 (3) 15% 70 (2-3/4) 15% 64 (2-1/2)	68 (2-11/16)	22 (7/8)	45
C	76 (3) [square]	**9-5:** 40% 76 (3) **12-8:** 20% 76 (3) 20% 70 (2-3/4) 20% 64 (2-1/2)	62 (2-7/16)	22 (7/8)	34
C	76 (3) [square]	**9-5:** 100% 76 (3)	59 (2-5/16)	13 (1/2)	31
C	64 (2.5) [square]	**9-5:** 100% 70 (2-3/4)	52 (2-1/16)	12 (15/32)	21
C	51 (2) [square]	**9-5:** 100% 70 (2-3/4)	52 (2-1/16)	11 (7/16)	16
C	38 (1.5) [square]	**9-5:** 100% 64 (2-1/2)	46 (1-13/16)	10 (13/32)	10
C	25 (1) [square]	**9-5:** 100% 64 (2-1/2)	46 (1-13/16)	9.5 (3/8)	6
C	13 (0.5) [square]	**9-5:** 100% 64 (2-1/2)	33 (1-5/16)	6 (1/4)	2.75

4. REGULATORY REQUIREMENTS

4.1 The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5.0 PRODUCT CONFORMANCE

5.1 Product Conformance. The product provided shall meet the salient characteristics of this Commercial Item Description, conform to the producer's own drawing, specifications, standards, and quality assurance practices, and be the same product for sale in the commercial market. The government reserves the right to require proof of such conformance.

5.2 Responsibility for Inspection. Unless otherwise specified, the contractor is responsible for the performance of all inspection requirements and may use any commercial facilities (including the contractor's own facilities) suitable for performance of the inspection requirements, unless disapproved by the Government. The Government reserves the right to perform any of the inspections deemed necessary to assure the item conforms to the specified requirements.

6. PACKAGING.

Preservation, packaging and marking shall be as specified in the contract or order.

7. NOTES.

7.1 Source of Documents

7.1.1 Federal Acquisition Regulation (FAR). Government Printing Office, Superintendent of Documents, Washington DC 20401-9371, **https://www.acquisition.gov/far/**

7.2 Ordering Data. The contract or order should specify the following:

a. CID document number
b. National Stock Number (NSN)
c. Type, Grade, and Size
d. Packaging requirements

7.3 Key words: Varnish, Bristle, Filament

MILITARY INTERESTS:
None: DoD has no registered interest
In revisions and amendments to this
Commercial Item Description until further notice.

Preparing Activity
GSA-FAS