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COMMERCIAL ITEM DESCRIPTION

RAGS, WIPING
(COTTON AND COTTON-SYNTHETIC)

This Commercial Item Description has been approved by the General Services Administration for use in lieu of Federal Specification DDD-R-30G dated July 5, 1983.

1. Salient characteristics.

1.1 This Commercial Item Description (CID) covers the requirements for cotton wiping rags and cotton-synthetic blended wiping rags made from unused or reclaimed fabrics, for use in the wiping of water, oil, and grease from miscellaneous items.

1.2 Classification.

1.2.1 Grades. Wiping rags shall be of the following grades as specified (see 6.2).

Grade A - 2.0 to 7.0 ounces per square yard

Grade B - 3.0 to 12.0 ounces per square yard

1.2.2 Colors. Wiping rags shall be furnished in the following colors as specified and shall be applicable to the grades indicated (see 6.2 and 6.3).

White - Grade A (only)

Mixed Colors - Grade A or B

2. Applicable documents.

2.1 The following documents, of the issues in effect on the date of the solicitation, form a part of this CID to the extent specified herein, in the event of conflict between this CID and any documents referenced in this CID, this CID shall take precedence.

2.1.1 Military Standards: MIL-STD-105, Sampling Procedures and Tables for Inspection by Attributes. (Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions should be obtained from the Commanding Officer, Navel Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.)

FSC 7920

2.1.2 Other Publications:

National Motor Freight Traffic Association, Inc., Agent: National Motor Freight Classification (Application for copies should be addressed to the American Trucking Associations, Inc., Traffic Department, 1616 P Street, N.W., Washington D.C. 20036).

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

American Society for Testing and Materials (ASTM) Standard: D276, Standard Methods for Identification of Fibers in Textiles. (ASTM standards are available from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103).

3. Requirements.

3.1 Material. Wiping rags shall be all cotton or cotton-synthetic blends made from either clean mill ends and mill remnants or reclaimed fabrics from household articles and garments. Rags shall be soft, absorbent, and of either woven or knitted construction. Heavily napped fabrics, mesh fabrics constructed from hard twisted yarns, and starched or stiffened fabrics are not acceptable. Rags made from United States flags, national flags of foreign countries, or remnants thereof are strictly prohibited.

3.1.1 Defective Characteristics. Rags exhibiting any of the following characteristics shall be considered defective:

(a) Rags containing stains which cover more than one tenth of the area of the rag.
(b) Rags containing an aggregate of more than 1 square inch of hardened surface.
(c) Rags containing dirt, dust, abrasives, or other clearly noticeable nonfibrous materials.
(d) Rags made of mesh fabrics, such as lace, scrim, and netting except that mesh will be acceptable as a border if not more than 1 inch in depth on an otherwise acceptable rag.
(e) Rags badly worn or tendered so as to be unsuitable for the intended purpose (see 4.3.1).
(f) Tattered parts less than 3 inches in width and more than 6 inches in length (see 6.3.5).

(g) Edges frayed or raveled continuously or intermittently to a depth of over 2 inches.
(h) Rags made from unopened sleeves, pants, and drawer legs.
(i) Any rags made from United States flags, national flags of foreign countries, or remnants thereof.
(j) Rags containing buttons, hooks, eyes, pins, or any other metallic or plastic fittings.
(k) Rags containing elastic yarns amounting to more than 5% of the area of the rag.
(l) (Grade A only). Rags made from fabrics which contain crotches, cuff hems, waistbands, pockets, collar reinforcements, weltings, and pipings over 1/2 inch in width that have not been completely removed, and unopened hems over 1/2 inch in width are unacceptable, except for rags made from sheets and pillow cases containing hems over 4 inches wide.
(m) (Grade B only). Rags weighing over 8 ounces per square yard and made from pants, overalls, jackets, coats, and skirts, having pockets, reinforcements (including collar, cuffs, buttonholes, and waistband reinforcements), crotches, welting, piping (such as used on slip covers, etc.), unopened hems over 1 inch in width, and patches with an area over 4 square inches are unacceptable.

3.1.2 Regulatory Requirements. In accordance with section 23.403 of the Federal Acquisition Regulations, the Government's policy is to acquire items composed of the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing employees to undue hazards from the recovered materials.

3.2 Size and measurement. Each wiping rag shall have an area of not less that 200 square inches and shall be not less than 9 inches wide nor more that 44 inches long (see 6.3.4) when inspected.

3.3 Weight.

3.3.1 Grade A. Grade A wiping rags shall not weigh less than 2.0 ounces per square yard or more than 7.0 ounces per square yard when inspected (see 3.8).

3.3.2 Grade B. Grade B wiping rags shall not weigh less than 3.0 ounces per square yard or more than 12.0 ounces per square yard when inspected (see 3.8).

3.4 Absorbency rate. All rags shall absorb water and oil within 30 seconds when tested in accordance with 4.2.2.

3.5 Washing and sanitization. All rags shall be thoroughly washed, rinsed, and sanitized (this processing shall be performed in the United States, its possessions, or Puerto Rico - see paragraphs 6.3.3 and 6.4).

3.6 Moisture Content. Rags shall have a moisture content not greater that 7.5 percent when tested in accordance with 4.2.4.

3.7 Baling. Rags shall be baled together in machine compressed bales of 50 pounds minimum net weight with a volume of not more that 3.5 cubic feet. The bales shall be secured with metallic or nonmetallic strapping, wire ties, or rope, in a regular and uniform manner which will permit stacking during transportation and storage. Bales weighing less than the 50 pound minimum requirement or exceeding the 3.5 cubic foot tolerance shall be cause for rejection (see 4.2.1).

3.8 Certificate of Compliance. Along with the Quality Approved Manufacturer Agreement, the contractor shall provide the name and address of the laundry where the rags have been washed, rinsed, and sanitized, if this has not been done by the contractor.

4. Quality assurance provisions.

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified in this CID. Except as otherwise specified, the contractor may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections or tests set forth in the specifications where such action is deemed necessary to assure that supplies and services conform to prescribed requirements. The contractor is responsible for insuring that components and materials used were manufactured, examined, and tested in accordance with referenced specifications and standards.

4.2 Test Procedures. Unless otherwise specified, sampling shall be in accordance with MIL-STD-105.

4.2.1 Weight/Volume Verification. Select 10 bales from the lot and determine the minimum net weight per bale. Select 5 of the 10 bales and determine the volume of each bale. Any bale weighing less 50 pounds in weight or exceeding 3.5 cubic feet in volume shall be cause for rejection of the lot.

4.2.2 Absorption. The lot size shall be expressed in terms of rags. Each bale will be assumed to contain 200 rags for sampling purposes. Using inspection level S-3 and an AQL of 6.5 percent defective, select a sample and test. Each sample rag shall be laid on a non-absorbent surface. One drop of distilled water and one drop of light machine oil, each 0.04 milliliter in volume and 72 degrees plus or minus 2 degrees Fahrenheit, shall be applied separately to applicable sample rags through a capillary tube allowing the drops to fall freely onto the rag from a height of approximately 2 inches. After 30 seconds, the samples shall be examined and absorption or nonabsorption of the water and oil reported. The rag is considered nonabsorbent if the water or oil remains wholly or partly above the surface of the rag.

4.2.3 Cotton Fiber Content. The lot size shall be expressed in units of rags. Each bale will be assumed to contain 200 rags for sampling purposes. The test sample unit shall consist of one rag. The sample rags shall be randomly selected using inspection level S-3 with an AQL of 6.5 percent defective. Rags chosen for the absorbency test may be used. The rags shall be tested in accordance with paragraph 4.2.3.1 to determine the presence of cotton fiber (see 3.1).

4.2.3.1 Identification of cotton. To remove oils, waxes and dirt, the specimen shall be washed in one of the following: ether, acetone, alcohol, or a 5-percent aqueous solution of sodium hydroxide. To remove dyes, one of the following methods shall be used: (a) By oxidation, using nitric acid, hydrogen peroxide, or chlorine water; (b) By solution, using alcohol, acetic acid, hydrochloric acid, or pyridine; or, (c) By reduction using hydrosulphite, stannous chloride, or hydrochloric acid with metallic zinc. After dirt, oils, waxes, and dyes have been removed, place a dozen fibers from the sample onto a slide. The fibers shall be immersed in 3 or 4 drops of Herzberg's stain, covered with a slide (avoiding air bubbles), and allowed to stand 2 minutes with surplus drained off. Examine with microscope using transmitted light and 100 diameters magnification. Magnification up to 500 diameters may be used if a more detailed examination is necessary. The sample fibers shall be compared with a reference sample which has been treated in the same manner.
The color of cotton (Gossypium sp.) in the natural state, ranges from white to ecru. The staple length of commercial cottons varies from about 1/4 inch to slightly more than 2 inches. Microscopically, most fibers appear much like a twisted ribbon with rounded edges. They have no longitudinal or cross markings; the lumens vary from very narrow to over 2/3 of the diameter of the fiber. Diameters of the fibers vary from about 9 to 25 microns and average from 16-20 microns. Undyed cotton fibers are stained pink to dark red in color by the Herzberg's stain.

As an alternative, ASTM Method D276 may be used to identify cotton fiber content.

4.2.4 Moisture Content. From the inspection sample for weight verification, randomly select 5 rags each from 5 bales (25 rags) with the moisture content to be determined immediately. If this is not possible, the samples, immediately upon selection, shall be placed in an air tight container or plastic bag and sealed to prevent moisture loss. To determine moisture content, place the rags in a tared air tight container and weigh. This weight minus the tare weight of the container is the original weight of the rags, symbolized below by "Wo". Remove the lid from the container and immediately place in an oven which has been preheated to a temperature of 221 to 230 degrees Fahrenheit (105 to 110 degrees Celsius). After a minimum of 2 hours, remove the container and immediately reseal. Allow to cool. After the container has cooled, reweigh. This weight minus the tare weight of the container is the dry weight of the rags, symbolized below by "Wd." The percent moisture content shall be calculated from the following formula:

$$\text{Percent Moisture Content} = [(Wo - Wd)/Wo] \times 100$$

The moisture content of the samples shall be considered the moisture content of the entire lot. If the moisture content of the sample unit exceeds 7.5 percent when inspected, the entire lot shall be rejected.

4.3 Examination for visual and dimensional characteristics. For the purpose of visual and dimensional inspection, the lot shall be defined as the number of rags submitted for inspection (this shall be the number of bales multiplied by 200, the approximate number of rags per bale), the sample unit shall be one rag. Sampling shall be in accordance with MIL-STD-105, inspection level S-4, AQL of 2.5 percent defective for majors and 4.0 percent defective for minors. Rags shall be selected at random and examined for the defects as listed in table I. During this examination, if any rag is suspected of not containing cotton by visual examination or by feel, the rags are to be tested in accordance with 4.2.3. If any rag fails the test in accordance with 4.2.3, it shall be classified as a major defect.

Table I.
Examination for visual and dimensional characteristics.

Char.	Defects	Classification Major	Minor
General	One or more rags made from United States flags, National flags of foreign countries, or remnants thereof (see 3.1) shall cause the entire lot to be rejected.		
Grades A and B			
	a. Rags containing no cotton fiber (any amount of linen or flax fiber is acceptable).....	X	
	b. Dirt, dust, and abrasive material....		X
	c. Rags containing elastic yarns in excess of 5 percent of the area of the rag.....		X
	d. Objectionable odor.....		X
	e. Not of specified dimensions (see 3.2).....	X	
	f. An aggregate of more than 1 square inch of hardened surface.....	X	
	g. Rags weighing less than or more than the amount specified (see 3.3).....	X	
	h. Rags made of mesh fabrics, such as laces, scrim, and netting, except that mesh will be acceptable as a border not more than 1 inch in depth on an otherwise acceptable rag.....	X	
	i. Rags made from starched or stiffened fabrics.....	X	
	j. Rags made from heavy napped fabrics and fabrics woven with hard twisted yarns.....	X	
	k. Stains which cover more than one-tenth of the area of the rag.....	X	
	l. Badly worn or tendered as to be unsuited for the intended purpose....	X	
	m. Tattered parts less than 3 inches wide and more than 6 inches long.....		X
	n. Edge frayed or raveled continuously or intermittently to a depth of over 2 inches.....		X

Table I. (Continued)
Examination for visual and dimensional characteristics.

Char.	Defects	Classification Major	Minor
	o. Unopened sleeves, pants and drawer legs.....		X
	p. Buttons, hooks, eyes, closed safety pins, or any other metallic or plastic fittings (one or more).....		X
	q. Rags that have not been thoroughly washed, rinsed, and sanitized.....	X	
	r. Rags containing fiber content labels that declare 100 percent synthetic fiber.....	X	
	s. Foreign objects or dangerous materials; such as nails, tacks, needles, pins, glass, sharp edged metal items, etc.....	3X*	
Grade A (only)	a. Unopened hems over 1/2 inch in width.....		X
	b. Rags containing crotches, cuff hems, waistbands, collar reinforcements, pockets, weltings, and pipings over 1/2 inch in width which are not sheets.....	X	
	c. Rags not white when specified (see 6.2 and 6.3.1).....	X	
Grade B	a. Rags weighing over 8 ounces per square yard and made from pants, overalls, jackets, coats, and skirts, having pockets, reinforcements (including collar, cuffs, buttonholes,and waistband reinforcements), crotches, welting, piping (such as used on slip covers, etc.), unopened hems over 1 inch in width, and patches with an area over 4 square inches.....	X	

* Defect is equivalent to three major defects as signified by "3X"

4.3.1 Examination for tenderness. Wiping rags which are in question as to tenderness (see 3.1.1e) shall be examined in the following manner:

The rag shall be grasped on opposite edges so that it remains fully opened and flat. There shall be approximately 3 inches of material gathered in each hand. With the arms extended, the rag shall be subjected to a steady outward force. If the rag can be easily separated in this manner, it shall be considered tender.

4.4 Examination of preparation for delivery. Inspect for the packing and marking requirements of Section 5, except for weight and volume, using MIL-STD-105, inspection level S-2, AQL 4.0 percent defective. The lot shall be all bales submitted for inspection, a sample unit shall be one bale.

5. Preparation for delivery.

5.1 Commercial packing. Wiping rags of one grade only shall be furnished in bales of weight and volume specified in paragraph 3.7. The bales shall be covered with clean serviceable material and secured with strapping, wire ties, or rope. Packaging and packing requirements other than those listed here shall be specified in the contract or purchase order.

5.2 Marking. Marking shall be as specified in the contract or purchase order. In addition, each bale shall be marked with the manufacturer's lot number.

6. Notes.

6.1 Intended Use. Rags are primarily used in the wiping away of water, oil, and grease from machinery, and for miscellaneous cleaning.

6.2 Ordering Data. Purchasers should select the preferred options herein and include the following information in procurement documents:

a) Title, number, and date of this specification.
b) Grade required (see 1.2.1). Note: It is suggested that Grade A, white rags, be ordered only where better quality rags are required.
c) Packaging and packing requirements if different from those specified here (see 5.1).
d) Marking requirements (see 5.2).

6.3 Interpretation.

6.3.1 White. The word "white" as contained in 1.2.2 shall be interpreted to mean the following type of rags: unbleached or fully bleached, and colored rags which have had the dye color completely removed (known as stripping rags) except that evidence of a dye color on seams of stripped rags will be acceptable. Ornamental color trimmings are acceptable provided that they are not over 5 percent of the area of the rag.

6.3.2 Mixed Colors. The words "mixed colors" as used in 1.2.2 is intended to include rags of any color, including "white" rags, as acceptable.

6.3.3 Sanitization. The word "sanitized" as used in 3.5 means that the rags have been submitted to temperatures of not less than 180 degrees Fahrenheit during washing cycles and 210 degrees Fahrenheit during heat drying (exhaust air 175 degrees Fahrenheit).

6.3.4 Size and Measurements. The width and length dimensions as specified in 3.2 are defined as follows:

The minimum width of a rag shall be the measurement between the two closest opposing points on the perimeter of a rag. The maximum length of a rag shall be the distance between the most distant points along the edges of a rag. When rags are nearly rectangular, the longer side shall be considered the "length."

6.3.5 Tatter. A tatter is a fabric part protruding from the body of the fabric.

6.4 Rinsing Agents. In the process of rinsing rags (see 3.5), it is permissible to use a wetting-out or surfactant agent to increase the absorbency of rags provided that rags meet all requirements of this specification, and are non-toxic.

6.5 Referencing NSNs:

7920-00-148-9666	Grade A, Mixed colors
7920-00-205-1711	Grade B, Mixed colors
7920-00-205-3570	Grade A, White

Preparing Activity
GSA-FSS, 7FXE