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SUPERSEDING
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COMMERCIAL ITEM DESCRIPTION

COATED ABRASIVE CLOTH, CROCUS

The General Services Administration has authorized the use of this commercial item description in lieu of Federal Specification P-C-458.

This description covers coated abrasives comprised of a backing of cloth coated on one surface with crocus abrasive grain.

Salient characteristics:

Crocus cloth shall be of the following types:

Type I - Sheets, closed coat, 9 X 11 inches.

Type II - Roll, closed coat, 50 yards long, width as specified.

Dimensional tolerances.

Type I - length, plus or minus 1/8 inch.
width, plus or minus 1/16 inch.

Type II - length, plus 12 inches, minus "0".
width, plus or minus 1/16 inch.

Abrasive. The abrasive shall consist essentially of ferric oxide (Fe_2O_3) and quartz. The abrasive shall be of the following fineness:

	U.S. Standard Sieve No. (conforming with ASTM E-11)
100 percent passing.	140
Not more than 20 percent retained.	325

Recovery and calculation of abrasive particle fineness.

I. Cut a 90 square inch specimen and a 9 square inch (1 X 9 inch) specimen from a sheet, or roll under test and reduce each to a convenient size for immersion in water. Place the pieces of the 90 square inch sample in an 800 ml. beaker, cover with a watchglass and heat until the abrasive is free of the cloth. Remove the cloth, and wash the adhering abrasive back into the beaker with a jet of hot water. Reheat to dissolve any glue or starch which may agglomerate the mineral particles and pour the contents of the beaker on the No. 140 sieve stacked on the No. 325 sieve and wash thoroughly, using hot water. Dry the sieves and the abrasive and weigh the abrasive, if any, on each sieve to the nearest milligram. Determine the total weight of the abrasive per 90 square inches using one of the procedures described below (II & III).

II. Place the pieces of the 9 square inch sample in a 250 ml. beaker containing 50 ml. of distilled water. Cover with a watchglass and heat until the abrasive is free from the cloth. Remove the cloth and wash the adhering abrasive back into the beaker with a jet of hot water. Boil the contents of the beaker until the volume is reduced to approximately 50 ml. and transfer to a weighed 100 ml. round bottom centrifuge tube with pour spout. Place the tube in a centrifuge and centrifuge at approximately 1500 r.p.m. until the liquid is clear and the abrasive has settled. Pour off the clear liquid; add 40ml. of hot water to the tube and stir the settled abrasive. Centrifuge 3 times as prescribed, decanting and adding water as prescribed above. After the third centrifuge, decant the liquid and dry the tube and abrasive in an oven at 100 degrees C. Weigh the tube and abrasive to the nearest milligram to obtain the abrasive weight per 9 square inches. Multiply by 10 to obtain the weight per 90 square inches.

III. Place the pieces of the 9 square inch sample in a 250 ml. beaker, add water and cover with a watchglass and heat until the abrasive is free from the cloth. Remove the cloth, wash the adhering abrasive back into the beaker with a jet of hot water. Heat to dissolve adhesive and filter the contents of the beaker through a dried and weighed No. 590 SE & S White Ribbon (or a No. 40 Whatman) filter paper and wash thoroughly with warm water. Dry the filter paper and the residue (or ignite in a platinum crucible). Weigh the filter and abrasive and obtain the weight of the abrasive by difference. If the filter is ignited, brush the mineral from the crucible onto the balance and obtain the weight of the mineral directly. Weigh to the nearest milligram and multiply by 10 to obtain weight per 90 square inches.

IV. Report: Weight of mineral, 140 mesh sieve, if any;

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Weight of mineral on 325 mesh sieve / Weight of mineral per 90 sq. in. = Percent retained on 325 mesh sieve.

Backing material. The backing material shall be good quality jeans cloth properly dyed and filled prior to coating.

Adhesive. The adhesive shall be a good quality, animal hide glue base suitable for the purpose intended.

Breaking strength (coated product). The minimum average breaking strength of the crocus cloth, per inch width, shall conform with the following requirements when tested in accordance with the cutstrip method of Method 5102 of Federal Test Method Standard 191A (issue in effect on the date of invitation for bids or request for proposal):

Machine direction	Cross direction
100 lbs/inch	45 lbs/inch

Flexibility. The crocus cloth shall show no evidence of major cracking in the abrasive coating or flaking of the abrasive coating from the cloth backing, when tested as follows:

At least five test pieces 1 inch in width shall be cut longitudinally (direction of warp) from a sheet or roll under test. The test pieces shall be conditioned for not less than 12 hours at 70 degrees plus or minus 2 degrees F., and 50 percent plus or minus 2 percent relative humidity before testing. The specimens shall be flexed with the ends parallel over a 3/16 inch smooth steel rod, securely held in a vise or other suitable means, with the abrasive side away from the rod. They shall be given 20 to and fro motions of approximately 3 inches, under tension of about 30 pounds at a temperature of 70 degrees plus or minus 2 degrees F., and a relative humidity of 50 percent plus or minus 2 percent. Specimens shall be inspected in a flat position for evidence of cracking in the abrasive coating, or flaking of the coating from the cloth backing, as a result of these tests.

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 herein. Except as otherwise specified in the contract or order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

Sampling.

Lot. All crocus cloth of the same type for inspection at one time shall be considered a lot for purposes of inspection.

Sampling for visual, dimensional and workmanship examination. A random sample of crocus cloth sheets or rolls as applicable shall be selected from each lot in accordance with Military Standard MIL-STD-105, "SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES", special inspection level S-4, AQL 2.5 expressed in terms of percent defective.

Sampling for tests. Samples for test shall be selected in accordance with MIL-STD-105, special inspection level S-2, AQL 6.5 expressed in terms of percent defective.

Certification of grading, breaking strength and flexibility. When specified in the contract or purchase order, a certificate of conformance may be furnished in lieu of actual testing on a lot by lot basis providing that:

(1) Objective evidence dated not more than two (2) years prior to the date of the start of the contract as described in the solicitation or date of the purchase order as applicable shall be available.
(2) Tests specified in the industry standards referenced herein have been performed by an independent test facility acceptable to the Government.
(3) That the product being offered is the same type and grade of abrasive and backing material and has been manufactured using the same material, processes and manufacturing techniques as the product tested.

Examination for preparation for delivery. A random sample of unit, intermediate and shipping containers (as applicable) shall be selected from each lot and examined for conformance with the preservation, packaging, packing, labeling and marking required in the contract or order. Samples shall be selected in accordance with MIL-STD-105, Inspection level II, AQL 6.5 expressed in terms of defects per hundred unit.

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, consistant with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing supplier's employees to undue hazards from recovered materials.

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

Packaging (DOD). The packaging shall be in accordance with ASTM Standard D3951, `Packaging, Commercial'.

Notes:

Purchaser should specify the typerequired and the width if Type II is specified. When certification of grading, breaking strength and flexibility in lieu of actual testing is acceptable, purchasers should so state in the procurement document.

The issues of ASTM E11, ASTM D3951, FEDERAL TEST METHOD STANDARD 191A and MIL-STD-105 in effect on the date of the invitation for bids or request for quotation shall be used to determine compliance with these requirements.

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

Copies of MIL-STD-105 and FEDERAL TEST METHOD STANDARD 191A may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402

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MILITARY INTERESTS:

Military Coordinating Activity:

YD

Custodians:

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Review Activities:

ME, AT

PREPARING ACTIVITY:

GSA-FSS