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SUPERSEDING
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FEDERAL SPECIFICATION

PUMICE; GROUND, ABRASIVE

This specification is approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers one type of ground abrasive pumice for general polishing and finishing use.

1.2 Classification.

1.2.1 Grades. Ground pumice shall be of the grades shown in table I, as specified (see 6.2).

2. APPLICABLE DOCUMENTS

2.1 The following specifications and standards, of the issues in effect on the date of the invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Standard:

Fed. Std. No. 123 - Marking for Domestic Shipment (Civil Agencies).

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

(Single copies of this specification and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.)

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

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(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks from established distribution points in their agencies.)

Military Specification:

MIL-A-3816 - Abrasives and Abrasive Products, for Shipment and Storage, Packaging and Packing of.

Military Standards:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.

MIL-STD-129 - Marking for Shipment and Storage.

(Copies of Military Specifications and Standards required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer).

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on the date of the invitation for bids or request for proposal shall apply.

ASTM:

ASTM E-11 - Specifications for Sieves for Testing Purposes (Wire Cloth Sieves, Round - Hole and Square - Hole Plate Screens or Sieves).

ASTM C294 - Standard Descriptive Nomenclature for Constituents of Natural Mineral Aggregates.

ASTM standards are available from the ASTM, 1916 Race Street, Philadelphia, PA 19103.

3. REQUIREMENTS

3.1 Material. The pumice shall be a ground product resulting from the processing of natural deposits.

3.1.1 Excluded impurities. The ground pumice shall be free from quartz or flint (quartzite or dense black or gray chert), and shall not contain more than 5 percent of obsidian and similar hard material (see 4.4.2).

3.1.2 Abrasive action. The ground pumice shall be furnished dry (pumice which is caked or has particles clinging together is not adequately dry) and shall have an abrasive action that will polish but not scratch glass (see 4.4.1).

3.1.3 Fineness. The ground pumice shall be of the fineness shown in Table I for the respective grades, all percentages being by weight, the sieves used shall conform to the requirements of ASTM E-11 (see 4.4.3).

TABLE I

GRADE	MINIMUM PERCENT PASSING		FINENESS	
			MINIMUM PERCENT RETAINED	
2	95	through No. 30 Sieve	95	on No. 80 Sieve
1-1/2	95	through No. 40 Sieve	95	on No. 100 Sieve
1	95	through No. 40 Sieve	95	on No. 120 Sieve
1/2	95	through No. 50 Sieve	95	on No. 140 Sieve
0-3/4	95	through No. 60 Sieve	95	on No. 200 Sieve
0-1/2	98	through No. 80 Sieve	69	on No. 325 Sieve
0	98	through No. 100 Sieve	60	on No. 325 Sieve
F	98	through No. 120 Sieve	47	on No. 325 Sieve
FF	98	through No. 140 Sieve	25	on No. 325 Sieve
FFF	98	through No. 200 Sieve	17	on No. 325 Sieve
FFFF	98	through No. 200 Sieve	10	on No. 325 Sieve

3.1.4 Tolerance. For grades F to FFFF inclusive, the indicated percentage required to be retained on a 325 sieve plus 10 percent will be acceptable.

3.2 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 suppliers' employees to undue hazards from the recovered materials.

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4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to 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 the supplies and services conform to prescribed requirements.

4.2 Sampling for acceptance.

4.2.1 Inspection lot. For purposes of sampling, a lot shall consist of all containers of the same grade and capacity offered for delivery at one time. The sample unit shall be one filled container.

4.2.2. Sampling for inspection of filled containers. A random sample of filled containers shall be taken from each lot in accordance with MIL-STD-105, at special inspection level S-2 and acceptable quality level (AQL) of 4.0 percent defective to verify compliance with all stipulations of this specification and the contract or purchase order regarding fill, closure, marking, and other requirements not involving tests.

4.2.3. Sampling for tests. A grab sample of not less than 1 ounce shall be taken from not less than 1 percent of the shipping containers in the lot, provided such containers contain not less than 100 pounds (45.4 kg). In case of smaller containers, a grab sample of not less than 1 ounce shall be taken at random from each lot of containers totaling not more than 5,000 pounds, or fraction thereof. The gross sample shall in all cases consist of not less than three grab portions taken at random from separate containers. With very large lots where the sample drawn as above will amount to more than 10 pounds, the percentage of packages sampled shall be reduced so that the amount drawn shall not exceed 10 pounds. The gross sample shall be rapidly mixed and placed in an airtight container, which will be filled, sealed, marked, accurately weighed, its weight and date of weighing recorded on the package, and forwarded to the testing laboratory.

4.3 Inspection.

4.3.1 Inspection of filled container. Each sample filled container selected in accordance with 4.2.2 shall be examined for defects of the container and closure, for evidence of leakage, and for unsatisfactory markings. Each sample filled container shall also be weighed to determine the amount of the contents. Any container in the sample having one or more defects, or under required fill, shall be rejected, and if the number of defective containers in any sample exceeds the acceptance number for the appropriate sampling plan of MIL-STD-105, the lot represented by the sample shall be rejected. Additionally, each sample filled container selected in accordance with 4.2.3 for tests, shall be examined for evidence of excess moisture (see 3.1.2). If any container shows evidence of excess moisture, then each sample container selected in accordance with 4.3.1 shall be opened and examined for excess moisture and the acceptance/rejection criteria defined in 4.3.1 shall apply.

4.3.2 Lot acceptance tests. The gross sample specimen selected in accordance with 4.2.3. shall be subjected to the tests specified in 4.4. If the specimen fails in one or more of these tests, the lot shall be rejected.

4.4 Tests.

4.4.1 Scratch test. A scratch test shall be made of each sample by placing a small quantity on a clean piece of plate glass and then rubbing the powder over the surface of the glass. Any pronounced scratches produced will be cause for rejection of the entire lot.

4.4.2 Impurities test. A petrographic analysis shall be made to determine impurities as listed in 3.1.1. The petrographic analysis shall consist of a visual examination under magnification of at least 20X with adequate lighting of a small quantity on a clean piece of plate glass or glass slide. Identification of the excluded impurities shall be made in accordance with the definitions in sections 5, 17, 19, and 22 of ASTM C294.

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4.4.3 Fineness test. The sieves used shall be stacked one below the other in order of fineness, with the pan below the finest sieve. Place a 50 gram sample on the top sieve, cover, and set the nest of sieves on the holder of a sieve machine. Run for 30 minutes on a standard Ro-Tap machine (or equivalent apparatus) operated at approximately 290 revolutions per minute (rpm) and 156 taps per minute. Weigh the amount left on each sieve and pan separately and calculate the percentage to determine conformance with table I. The sieving machine may be any mechanical shaker that gives the above rate of operation.

^{1/} Source of Ro-Tap testing sieve shaking machines is available by writing to the Abrasive Grain Association, 1230 Keith Bldg., Cleveland, OH 44115.

5. PREPARATION FOR DELIVERY

5.1 Packaging and packing. Unless otherwise specified in the contract or purchase order, the abrasive shall be packaged and packed in accordance with MIL-P-3816, as specified for the applicable level (see 6.2).

5.2 Marking.

5.2.1 Civil agencies. In addition to any special markings specified in the contract or purchase order, packages and shipping containers shall be marked in accordance with Fed. Std. No. 123.

5.2.2 Military activities. Packages and shipping containers shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 Intended use. Pumice conforming to this specification is intended for polishing metal, plastic, hard rubber parts, finishing glass, mirrors, and furniture.

6.2 Part Number. Pumice conforming with this specification shall be identified by a part number configuration consisting of identification of the general specification number and the grade. This part numbering system is intended for identification and cross-indexing of the item within the Federal cataloging system. Part numbers are not required to be placed on the product or container. See example part number on next page.

EXAMPLE: F821ØFFF

 | | Grade (e.g. ØØØ2, Ø-1/2, ØFFF, etc. see Table I.)
 | | General specification number.

6.3 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Grade required (see 1.2.1).
- (c) Selection of applicable packaging and packing required or specify alternative packaging and packing (see 5.1).

MILITARY INTERESTS:

Military Coordinating Activity
NONE: DoD has waived coordination on revisions and amendments to this Federal specification until further notice.

PREPARING ACTIVITY:

GSA - FSS (7FXE)