MILITARY SPECIFICATION

QUARTZITE (GROUND)
(FOR USE IN AMMUNITION)

1. SCOPE

1.1 This specification covers one type of Quartzite for use as a thickening agent.

2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids, or request for proposal, form a part of this specificatlon to the extent specified herein.

SPECIFICATION

FEDERAL

RR-S-366 - Sieves; Standard, Testing
UU-S-48 - Sacks, Paper, Shipping

STANDARDS

MILITARY

MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes (ABC-STD-105)
MIL-STD-109	Quality Assurance Terms and Definitions
MIL-STD-129	Marking for Shipment and Storage
MIL-STD-1235	Single and Multilevel Continuous Sampling Procedures and Tables for Inspection by Attributes

FSC: 1345

(Copies of specifications, standards drawings and publications required by contractors 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, also, form a part of this specificatlon to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids shall apply.

AMERICAN SOCIETY FOR TESTING MATERIALS

ASTM Designation C295-52T - Petrographic Examination of Aggregates for Concrete

(Copies of ASTM Standards may be obtained from the American Societ for Testing Materials, 1916 Race Street, Philadelphia Pa.)

AMERICAN FOUNDRYMEN'S SOCIETY

Foundry Sand Handbook

(Copies of this handbook may be obtained from the American Foundrymen's Society, Chicago, Illinois.)

3. REQUIREMENTS

3.1 The material shall consist of pulverized quartzite which conforms to the following requirements:

3.1.1 Form. -When examined mlcroscopically as specified in 4.3.1 the material shall show crystals having sharp angles (indicative of material made from crushed quartz that has not appreciably decomposed) and there shall be a variety of size of particles.

3.1.2 Chemical Composition.-The material shall contain a minimum of 98 percent silica (SiO_2, when tested as specified in 4.3.2.

3.1.3 Loss on Ignition. -The loss on ignition shall not exceed 1.5 percent when tested as specified in 4.2.3.

3.1.4 Granulation. -Unless otherwise specified on drawing the percentage of course particles retained on a U.S. 325 sieve shall not exceed 3.0 percent when tested as specified in 4.3.4.

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 in the contract or order, the supplier 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 tne inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements. Reference shall be made to Standard MIL-STD-109 in order to define the terms used herein.

4.1.1 Submission of product. -At the time the completed lot of produce is submitted to the Government for acceptance the contractor shall Supply the following information accompanied by a certificate which attests that the information provided is correct and applicable to the product being submitted:

a. A statement that the lot complies with all requirements and quality assurance provisions specified in this specification.
b. Specification number and date, together with an identification and date of changes.
c. Certificates of analysis on all material used directly by the contractor when such material is controlled by Government specification, shall be made available upon request by the contracting officer.
d. Quantity of product in the lot.
e. Date submitted.

The certificate shall be signed by a responsible agent of the certifying organization. The initial certificate submitted shall be substantiated by evidence of the agent's authority to bind his principal. Substantiation of the agent's authority will not be required with subsequent certificates unless, during the course of the contract, this authority is vested in another agent of the certifying organization.

4.2 Inspection provisions

4.2.1 Lot formation. -As applied to Government inspection of units of product, the term "lot" shall mean "Inspection lot" and shall consist of that quantity of material offered for delivery at one time. In addition, the material shall be mlned by one producer in the same location. The product shall be submitte for inspection in accordance with andard MIL-D-105 (or Standard MIL-STD-1235 when applicable .

4.2.2 Examination.-Sampling plans and procedures for the following classifications of defects shall be in accordance with MIL-STD-105 (ABC-STD-105), except that inspection for critical defects shall be 100 percent. Contractor's sampling plans, if used, shall be approved by the Government and shall provide, as a minimum, the protection afforded the Government by the sampling plans in MIL-STD-105. Continuous sampling plans in accordance with MIL-STD-1235 may be used if approved by the procuring activity. Also, at the option of the procuring activity, AQL's and sampling plans may be applied to the individual characteristics listed, using an AQL of 0.40 percent for each Major defect and an AQL of 6.65 percent for each Minor defect except where 100 percent inspection is specified.

4.2.2.1 Bags, prior to filling

Categories	Defects	Method of Inspection	Code No. (See 6.2)
Critical:	None. defined		
Major:	AQL 1.50 Percent		
101.	Bags cut, torn or punctured	Visual	01001
Minor:	None defined		

4.2.2.2 Bags, sealed

Categories	Defects	Method of Inspection	Code No.
Critical:	None defined		
Major:	AQL 1.50 Percent		
101.	Weight of contents	Scale	U2001
102.	Closure incomplete or damaged to the extent that contents Sift out	Visual	02002
Minor:	AQL 1.50 Percent		
201.	Markings misleading or unidentifiable	Visual	02003

4.2.3 Sampling

4.2.3.1 A representative composite sample of 1000 grams shall be prepared for each lot. This will be accomplished by sub-sampling 50 gram quantities from 20 randomly selected containers and combining these sub-samples into a master sample. This sample will be used for performing the tests specified in 4.3. If this sample fails to comply with any of the requirements specified in 3.1 the lot shall be rejected.

4.3 Test methods and procedures

4.3.1 Form, Major Defect, Defect Code No. 03001.-Determine in accordance with ASTM Designation: C295-52T.

4.3.2 Chemical Composition, Major Defect, Defect Code No. 04001.-Determine the silica (SiO_2) in accordance with method described in Foundry Sand Handbook. Determine the silica (SiO_2) on a water-free basis (correction for moisture).

4.3.3 Loss on Ignition, Major Defect, Defect Code No. 05001.-Determine the percentage loss on ignition in accordance with method given in the Foundry Sand Handbook.

4.3.4 Granulation, Major Defect, Defect Code No. 06001.-Determine the granulation of the sample using (unless otherwise specified on drawing) a #325 U.S. Standard Sieve (U.S.S.S.) conforming to Federal Specification RR-S-366 as follows:

Place a weighed portion of this sample, approximately 100 grams, in the top sieve of the specified nest of sieves, properly superimposed and assembled with a bottom pan. Cover the assembly and shake for 5 minutes by means of a mechanically operated sieve shaker, which imparts to the sieves a rotary motion and tapping action of uniform speed of 300 plus or minus 15 gyrations and 150 plus or minus 10 taps of the striker per minute. The portions retained or passed by the various sieves shall be weighed and the results calculated to a percentage basis as required.

5. PREPARATION FOR DELIVERY

5.1 Packing

5.1.1 Bags.-Unless otherwise specified in the contract or purchase order, the quarzite shall be packed in bags in accordance with Specification UU-S-48. (Number 22X, Class A or B, Type Optional - lb. max.)

5.1.2 Level C. -The quartzite shall be packed to afford protection against damage during direct shipment from supply source to the first receiving activity for immediate use, Containers shall comply with Uniform Freight Classification Rules and Container Specifications for rail shipments or National Motor Freight Rules and Container Specifications for truck shipment as applicable.

5.2 Marking. -In addition to any special markings required by the contract or purchase order, containers shall be marked in accordance with MIL-STD-129. Marking shall include, but is not limited to the following information:

a. Manufacturer's name.
b. Product designation.
c. Lot number.
d. Date of manufacture.
e. Number of this specification

6. NOTES

6.1 Ordering data. —Procurement documents should specify the title, number, class and date of this document.

6.2 Inspection code numbers.-The five diglt code numbers assigned to the inspection herein are to facilitate future data collection and analysis by the Government.

6.3 Intended use. -The quartzite covered in this specification is intended to be used with explosive mixtures and as a thickening agent in laminac.

6.4 Sources for this material include, but is not limited to :

AGSCO Corporation, Paterson, New Jersey
Pennsylvania Glass Sand Corp., Hancock, W. Virginia
Standard Silica Corp., Chicago, Illinois

Custodian :
Army-MU

Preparing activity:
Army-MU

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