



CORPORATE PURCHASING SPECIFICATION

AA53402

Rev No. 02

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FRENCH CHALK POWDER (TALCUM POWDER)

1 GENERAL

This specification governs the quality requirements of finely ground French Chalk Powder (Talcum powder).

The material shall be white, free from foreign matter, grit and hard lumps. It shall have a smooth and soapy feel.

2 APPLICATION

Used as filler in insulating putties and for preventing sticking of resinous material.

3 COMPLIANCE WITH NATIONAL STANDARDS

There is no national standard covering this material. However, assistance has been derived from IS 380-1978 in formulating this specification.

4 MATERIAL

French chalk shall be obtained from natural minerals such as steatite talc or soap stone and processed suitably. It shall be in the form of dry, fine, white powder free from extraneous impurities, except small quantities of substance naturally occurring in the mineral.

5 TEST SAMPLES

5.1 A sample of approximately 500 gms. from every lot shall be taken for testing. If the results of the testing do not conform to the stipulations of this specification, two more samples from the same lot shall be taken for testing. If two out of three results do not conform to the specification, the material shall be considered as not conforming and hence rejected.

5.2 Test for moisture and volatile content

This shall be determined by finding the weight loss of about 5g of material after heating at 105 to 110°C till a constant weight is achieved.

5.3 Test for matter soluble in HCl

This shall be determined on a pre-dried sample (as Cl 5.2) is weighed accurately and transferred to a 200 ml beaker. 5 ml of rectified spirit is added to thoroughly wet the material and then 100ml hydrochloric acid is added. After boiling for 10 minutes, the insoluble matter is filtered off through a tared sintered glass crucible (G.No. 4). The residue is further washed with water to free it from chlorides and dried at $140 \pm 5^\circ\text{C}$ for one hour and weighed.

5.4 Test for pH

10.0 g of the pre-dried sample (as at Cl 5.2) is mixed thoroughly with 100ml distilled water for one minute and the pH is determined using a suitable pH meter.

Revisions:

As per clause 44.4.a) of MOM of MRC-CPO+NM

APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(CPO+NM)

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**5.5 Test for Iron content**

A standard iron solution is prepared by dissolving 0.4911 g of ferrous ammonium sulphate $\text{FeSO}_4(\text{NH}_4)_2 \text{SO}_4, 6\text{H}_2\text{O}$ in 10ml of dilute sulphuric acid (10 percent by volume) and diluted with water to 1000ml. One ml of this solution is equivalent to 0.1 mg of iron (as Fe_2O_3).

1.0 g of the pre-dried sample (as at Cl 5.2) is digested with 5ml water and 15 ml of concentrated hydrochloric acid for 1 hr. on a hot plate without boiling. The beaker in which digestion done is covered with a watch glass containing some water. After the digestion is done, the underside of the watch glass is washed with water into the beaker. The residue is washed with hot water six times and the washings added to the beaker. The volume of the filtrate is made upto 250ml with water. 25 ml of this is pipetted out in a Nessler cylinder and 50 mg of ammonium persulphate and 15ml butanolic Potassium Thiocyanate solutions are added and the volume made upto 50ml with water.

A control test is carried out in another Nessler cylinder with 3ml of standard iron solution and the same quantities other reagents exactly in the same way as above.

If the intensity of the colour obtained in the test with the material sample is not greater than that in the control test, the iron content (as Fe_2O_3) of the sample is taken as less than 0.3%.

Any other suitable analytical method can also be followed for estimating the iron content of the sample material.

6 PROPERTIES**6.1 Free moisture and volatile matter**

0.5%, max.

6.2 Loss on ignition (IS 380)

4%, max.

6.3 Matter insoluble in hydrochloric acid

95%, min.

6.4 Grit (IS 380)

0.02%, max.

6.5 pH (of 10% solution)

8.5%, max.

6.6 Iron content (expressed as Fe_2O_3)

0.3%, max.

6.7 Particle size:

The material shall have no residue when passed through 75 micron sieve.



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7 TEST CERTIFICATES

Unless otherwise stated, three copies of test certificates shall be supplied along with each consignment.

In addition, the supplier shall ensure to enclose one copy of test certificate along with their dispatch documents to facilitate quick clearance of the material.

The test certificates shall show the following details.

AA53402 (Rev. 02): FRENCH CHALK POWDER (TALCUM POWDER)

Supplier's grade

Batch/lot No.

Test values obtained against clause 5 & 6 and certificate for compliance to clause 4 of this specification.

8 PACKING AND MARKING

The material shall be properly packed in polyethylene bags which shall in turn be kept in Hessian bags to ensure protection from damage during transit as well as from dirt, dust and moisture/humidity. The quantity packed in each bag shall preferably be 20kg.

Each package shall be clearly marked with identification slip giving following information:

AA53402: FRENCH CHALK POWDER (TALCUM POWDER)

BHEL Order No.

Batch/lot No.

Net Wt. /Gross Wt.

9 REFERRED STANDARDS (Latest Publications Including Amendments)

NIL