

**CORPORATE PURCHASING SPECIFICATION**

AA 533 05

Rev. No. 01

PREFACE SHEET

FIRECLAY MORTAR

**FOR INTERNAL USE ONLY
REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS**

Comparable Standards:

1. INDIAN : IS : 195 – 1991

Suggested / Probable Suppliers and Grades :

1. M/s. Modern Refractories, Nagpur
2. M/s. Burn Standard Co. Ltd., Katni
3. M/s. Amarnath Bhaskar & Sons, Faridabad
4. M/s. Premier Refractories, Katni

User Plant References:

1. BHOPAL : ---
2. HYDERABAD : ---
3. CFFP, HARDWAR : ---

Revisions:

Cl: 19.9.27 of MOM of MRC-FN

APPROVED :

**INTERPLANT MATERIAL
RATIONALISATION COMMITTEE-MRC (FN)**

Rev. No. 01

Amd.No.

Reaffirmed

Prepared

Issued

Dt. of 1st Issue

Dt:15.06.2005

Dt :

Year :

BHOPAL

Corp. R&D

April, 1995

**FIRECLAY MORTAR****1.0 GENERAL:**

This specification governs the quality requirements of Fireclay Mortar used for laying of fireclay refractories in furnaces and ladles. Fireclay mortar is mainly a suitable mixture of plastic fireclay and fireclay grog (calcined fireclay or broken fireclay refractories).

2.0 APPLICATION:

Used as a lining material for joining and repair of fireclay refractory bricks in furnaces and ladles.

3.0 COMPLIANCE WITH NATIONAL STANDARD:

The material shall comply, in general, with the requirements of the following national standard and also meet the requirements of this specification.

IS : 195-1991, Gr.: I : Fireclay Mortars For Laying Fireclay Refractory Bricks

4.0 TEST SAMPLES: As per IS:1528**5.0 PROPERTIES:**

When tested in accordance with the relevant clauses of IS: 1527 and IS :1528, mentioned against each, the test sample shall show the following values:

5.1 CHEMICAL COMPOSITION:

The material, when analysed in accordance with IS:1527, shall conform with the following composition:

Element	Percent
Al ₂ O ₃	37 minimum
Fe ₂ O ₃	3 maximum

5.2 PHYSICAL:**5.2.1 DRYING AND FIRING SHRINKAGE (IS:1528):**

Drying and firing shrinkage shall be measured on hand moulded briquettes made after through mixing of mortar with 10–20% of water. Samples shall be prepared by casting in to a size of 160 mm X 40 mm X 40 mm.

5.2.1.1 **DRYING SHRINKAGE:** 2% maximum, at 110°C

5.2.1.2 **FIRING SHRINKAGE:** 0.5% maximum, at 1400°C for 2 hours

5.2.2 **FIRENESS:** 95% passing through IS sieve : 150 micron, minimum

No particle of fireclay powder shall be so large as to be retained on IS sieve 1.6 mm.

Revisions :
CI 19.9.27 of MOM of MRC-FN

APPROVED :
INTERPLANT MATERIAL
RATIONALISATION COMMITTEE-MRC (FN)

Rev. No. 01

Amd.No.

Reaffirmed

Prepared
BHOPAL

Issued
Corp. R&D

Dt. of 1st Issue
April, 1995

Dt: 15.06.2005

Dt :

Year :

**5.2.3 REFRACTORINESS (IS:1528):**

Pyrometric Cone Equivalent ASTM Cone No. (Min) : 31, minimum

6.0 INSPECTION AT SUPPLIER'S WORKS:

Whenever specified, tests and inspection are to be conducted in the presence of BHEL's representative.

The supplier shall offer BHEL's representative all reasonable facilities, without charge to satisfy the latter that the material is being furnished in accordance with this specification. The supplier shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities are not available at his works, the supplier shall make necessary arrangements for carrying out the prescribed tests elsewhere. The supplier shall notify BHEL in advance about the readiness of the material for inspection and testing. BHEL reserves the right to test the material at BHEL's work and the final acceptance of the material shall be based on these test results.

8.0 TEST CERTIFICATES:

Unless and otherwise stated, three copies of certificates shall be supplied along with each consignment giving the following information.

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.

AA 533 05 (Rev. No. 01) : Fireclay Mortar

BHEL order no.

Manufacturer's / supplier's name.

Trade mark, if any.

Batch / lot no.

Quantity Supplied.

Test results of clause 5.0.

8.0 PACKING AND MARKING:

The material shall be packed in air tight, moisture proof steel drums of 50 kg each. Each container shall be legibly marked or labelled with the following information.

AA 533 05 : Fireclay Mortar

BHEL Order No.

Manufacturer's / supplier's name.

Trade mark, if any

Batch / Lot No.

Quantity supplied

9.0 REJECTION AND REPLACEMENT:

If the material does not comply with the requirements of this specification during receipt inspection at BHEL or if any defect is found during further processing of the material, BHEL reserves the right to reject the whole consignment notwithstanding any previous certification of satisfactory testing and / or inspection. The supplier shall undertake to replace the rejected material at his own cost and the rejected material shall be taken back by the supplier after fulfilling the commercial terms and conditions.

10.0 REFERRED STANDARDS (Latest Publications Including Amendments):

1) IS:195

2) IS : 1527

3) IS : 1528