



**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

HY53699

REV. NO. 00

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HIGH SILICA SAND FOR STEEL CASTING

1.0 SCOPE:

This specification covers the requirements of high silica sand for steel castings for use in foundry steel castings in foundry.

2.0 APPLICATION:

Used as raw material in the preparation of moulds and cores for manufacturing of steel castings.

3.0 COMPLIANCE WITH NATIONAL/INTERNATIONAL STANDARDS:

This specification generally conforms to IS:1987-1974 (Reaffirmed 1991).

4.0 SHAPE & SIZE:

4.1 Grain Fineness and Distribution: Min. 72% of sand should be in well defined grading distributed on 3 adjacent sieves. Average grain fineness no. should be 40 to 45.

4.2 Grain Shape: Sand grain shape should be subangular to angular.

4.3 Size Grading: Coarse grain fraction retained on I. S. SIEVE 60 (600 Microns) and above should be 20% Max. Main fraction passing through I. S. SIEVE 60 (600 Microns) and retained on SIEVE NO.40 (425 Microns); SIEVE NO.30 (300 Microns) and SIEVE NO.20 (212 Microns) should be Min. 72%. Medium fine fraction retained on I.S. SIEVE NO.15 (150 Microns) should be 6% Max. Fine fraction retained on I.S. SIEVE NO.10 (106 Microns) and below should be 2% Max.

5.0 CHEMICAL COMPOSITION:

The chemical composition shall be as under:

Silica SiO ₂	:	99.0% Min.
Clay content	:	0.5% Max.
Moisture	:	NIL
Carbonates	:	NIL

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6.0 GENERAL INSPECTION CONDITIONS:

- a) Samples from each consignment either lorry or wagon will be taken for testing grain distribution as per 4.0 (Sieve analysis). Approved consignments only will be permitted from unloading.
- b) Periodically samples from any consignment will be tested for clay content and chemical composition and if consistency in the quality is not maintained, the order will be cancelled.

7.0 SUPPLY CONDITION:

During transportation by open lorry sand to be protected from moisture by providing tarpaulin all around the sand.

8.0 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 all the commercial terms and conditions.