



CORPORATE PURCHASING SPECIFICATION

AA12901

Rev No.03

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HIGH PURITY ZINC INGOTS, Gr: Zn 99.99

1.0 GENERAL:

This specification governs the quality requirements of High purity Zinc Ingots.

2.0 APPLICATION:

For alloying additions in the foundry for galvanizing, fluxes, anodes, etc.

3.0 CONDITION OF DELIVERY:

As cast.

4.0 COMPLIANCE WITH NATIONAL STANDARDS:

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

IS: 209-1992, Gr: Zn 99.99: Zinc Ingots

5.0 SIZE AND SHAPE:

The material shall be supplied in the form of ingots weighing not more than 30 kg each. The material may be supplied in the form of slabs also.

6.0 MANUFACTURE:

Zinc shall be produced from the ore by any approved process of smelting and refining.

7.0 FREEDOM FROM DEFECTS:

The surfaces of ingots shall not show any pipes, oxide inclusions, slag or foreign matter and shall be clean. On fracture, no inclusion of foreign matter shall appear at the section of breakage.

8.0 TEST SAMPLES:

Unless otherwise agreed, 5% of ingot shall be selected from each consignment representing one melt of the metal produced under uniform conditions of manufacture and offered for tests at one time.

The method of preparing samples for chemical analysis from the ingots selected shall be in accordance with IS: 1817 and for spectrographic analysis shall be in accordance with IS: 8816.

Revisions:
Clause No. 25.03 of MOM of MRC-FN

APPROVED:
INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(FN)

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9.0 CHEMICAL COMPOSITION:

The chemical composition of the material, when analysed in accordance with IS: 2600 - Method of chemical analysis of Zinc (smelter), shall be as follows:

Element	Percent	
	Min.	Max.
Zinc	99.99	-
*Lead	-	0.003
*Cadmium	-	0.003
*Iron	-	0.003
*Tin	-	0.001
*Copper	-	0.002
*Thalium	-	0.001
*Indium	-	0.0005
*Total Impurities	-	0.01

* These elements need not be determined. However, the supplier shall ensure that the composition of the material lies within the limits specified above.

Spectrographic methods of analysis in accordance with IS: 2599 may be adopted as an alternate.

10.0 INSPECTION, DEVIATION AND REPLACEMENT:

- 10.1** BHEL reserves the right to witness the testing of the material at supplier works and therefore the supplier shall notify the readiness of the material in advance.
- 10.2** BHEL may also opt for third party inspection. If so, BHEL may either specify a third party or else give a list of third party inspection agencies, out of which supplier may select one of his choice.
- 10.3** 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.
- 10.4** BHEL may, at its discretion, test the material after receipt and acceptance of the material will be based on the BHEL's test results.
- 10.5** Supplier shall ensure that the material is free from extraneous material. The material shall be rejected if it is not free from extraneous material.
- 10.6** For result of analysis and properties of material the decision of BHEL shall be final and binding on the supplier.
- 10.7** If the material received is not found suitable according to the requirements, it shall be replaced free of cost by the supplier.
- 10.8** For any deviation, demanded by the supplier from the specification, prior approval of BHEL must be obtained.



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11.0 TEST CERTIFICATES:

Unless and otherwise stated, one original and three copies of certificates from the original manufacturer 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 the despatch documents to facilitate quick clearance of the material.

Manufacturer supplying material directly to BHEL should include BHEL PO No. in the Test Certificate. Any other supplier should provide a covering letter along with original manufacturer Test Certificate as above mentioning BHEL PO No.

The test certificates shall bear the followings information:

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BHEL order No.

Supplier's reference and name

Trade mark, if any

Melt No:

Consignment/ Identification No.

Results of Chemical analysis.

12.0 PACKING AND MARKING:

The material shall be suitably packed to prevent damage during transit.

Each package shall be legibly marked or labelled with the following information:

AA12901: HIGH PURITY ZINC INGOTS, Gr: Zn 99.99

BHEL Order No.

Melt No.

Quantity supplied.

Supplier's Name and reference

Trade mark if any.

13.0 ENVIRONMENTAL REQUIREMENTS:

The supplier shall furnish Material Safety Data Sheet (MSDS) covering all information relating to human safety and environmental impacts of the hazardous materials particularly during their transportation, storage, handling and disposal along with each supply.

Each container shall be marked with corresponding symbol and minimum worded cautionary notice for flammable / corrosive / toxic / harmful / irritant and oxidizing etc. as applicable.

14.0 Referred Standards (Latest publications including amendments):

- 1) IS: 1817
- 2) IS: 8816
- 3) IS: 2600
- 4) IS: 2599