



CORPORATE PURCHASING SPECIFICATION

AA53607

Rev No. 04

PAGE 1 of 3

ZIRCON WASH – ALCOHOL BASE – READY USE

1 GENERAL:

This specification governs the quality requirements of Zircon Wash – Alcohol Base, for ready use in foundries.

2 APPLICATION:

Alcohol base Zircon paint shall be ready to use for giving coating on mould and core surfaces coming in contact with liquid metal such as Al alloys, Cu alloys, Cast Iron, Ni-hard and steel (max. temp 1610°C). The paint shall be applied with the help of brush.

3 COMPLIANCE WITH NATIONAL STANDARDS:

The material shall comply, in general, with the following national standards and also meet the requirement of this specification – IS: 10033-1992

4 TEST SAMPLE:

A composite sample shall be prepared by drawing material from 5 drums per batch of 1 ton or part thereof.

5 PROPERTIES:

5.1 Viscosity:

53 – 57 Baumme

5.2 ZrO₂ content:

62% minimum

5.3 Solid content :

75% minimum

5.4 Solvent:

Ethyl alcohol to IS 6749

Isopropyl Alcohol to IS2631

5.5 Extender:

No extender is permissible.

5.6 When left undisturbed for 1 hours after maintaining the specified baumme, the solid content should not settle down.

Revisions:

As per clause no 27.5 of MOM of MRC-FN

APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(FN)

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**6 COATING QUALITY:**

- 6.1 The paint shall give uniform coating on mould surface and should not peel off or develop cracks on lighting or drying.
- 6.2 The paint should not peel off from a coated AFS Sample dried at 200°C for 2 hours.
- 6.3 On lighting up the paint, the thinner part should burn out in blue flame and should not leave wet patches/black marks on mould/core surface.
- 6.4 The dried coating surface should have sufficient hardness so that the paint does not peel off when scratched by nail or does not come out on gentle rubbing.

7 KEEPING PROPERTY (SHELF LIFE):

The available shelf life of Alcohol base paint shall be 6 months minimum at BHEL. When stored in covered dry place in the original sealed containers under normal temperature conditions, the material shall retain the properties prescribed in this specification for the duration of the shelf life..

8 ACCEPTANCE:

- 8.1 The material shall be accepted on the basis of the properties given in Clause No. 5.1, 5.2 and 6.2.
- 8.2 For a new vendor, shop trial shall be additional requirement where mould and core of a casting shall be painted and properties as per Clause No. 5.6, 6.1, 6.3 and 6.4. The casting shall be checked at Knock-out stage to assess the surface finish, sand fusion and sand sticking

9 INSPECTION & REPLACEMENT:

- 9.1 BHEL reserves the right to inspect material at site before despatch. However inspection at BHEL shall be final. The supplier shall offer BHEL's representative all reasonable test 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 test elsewhere. The supplier shall notify BHEL in advance about the readiness of the material for inspection and testing.
- 9.2 If the material received at BHEL is not found in accordance with the requirements, it shall be rejected and the supplier will have to replace it free of cost at the earliest.

10 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.

11 TEST CERTIFICATES:

- 11.1 Unless otherwise specified, one original and three copies of original manufacturer's test certificates shall be supplied along with each consignment. In addition, the supplier shall ensure to send one copy of test certificates along with the dispatch documents to facilitate quick change of the material.

The certificates shall bear the followings information:

- a) Specification No. & item description
- b) BHEL PO No. with Date
- c) Supplier reference / trade mark, if any
- d) Identification No. / Batch No.
- e) Date of manufacture
- f) Shelf life



CORPORATE PURCHASING SPECIFICATION

AA53607

Rev No. 04

PAGE 3 of 3

g) Test results

h) Any other specific information which the supplier would like to convey

11.2 Suppliers other than the original manufacturer shall ensure providing original manufacturer's test certificate with linkage to supplier's invoice stating the batch No., Lot No., etc. of the supply

12 PACKING AND MARKING:

Packing shall be that of the original manufacturer. The material shall be supplied in sealed corrosion resistant container, capacity 10 to 40 kg, which shall bear the following information:

- a) Supplier's name and trade mark, if any.
- b) Name of the product
- c) Date of manufacture
- d) Shelf life
- e) Batch No.
- f) Net Weight

13 REFERRED STANDARDS (Latest publications including amendments):

- 1) IS: 2631
- 2) IS: 6749