

Supply Chemicals

Dear Sirs;

Ref to a/m subject, you are kindly requested to bid concerning the supply of the following:

1- Aluminum - Titanium - Boron rod master alloy:

Introduction:

This sheet involved to cover the chemical, physical and metallographic requirements as well as the test procedures for controlling the quality of Ti / B / Al - rod. master alloy produced by continuous casting 3-and rolling

1. Chemical requirement:

Ti% 4.5-5.5

B% 0.9-1.1

Al Balance

The material must be manufactured from aluminum of 99.7 % purity min. according 10 AA standards.

2. physical requirements:

2.1.General appearance:

2.1.1. Surface should be clean and free from any defects.

2.1.2. Rod should be of uniform cross section, the diameter must be 9.5 ±0.3mm.

2.1.3. Mechanical damage not deeper than 1 mm x 2.5 cm long
- coil, containing less than 10% major Imperfections may be accepted when no breakage occurs on bending otherwise not allowed.

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2.2. Coil diameter:

Inner diameter 360 (+5 - 0 mm)

Weight :180-200 kg!

2.3. coding: The metal rod should has the producer's name stamped.

3. Metallographic requirements:

3.1. Structure:

The metallographic structure will be determined by microscopic examination of a 13 mm rod segment 'ground. and polished In longitudinal direction
- cross section also examined.

3.2. Requirements:

3.2.1. Inclusions:

3.2.1.1. Ti, Si & Al carbides, undissolved titanium and other metallic (e.g. ALB) or non-metallic (e.g. refractory material) Inclusion. are not acceptable

3.2.1.2. all oxides of the foil typo are acceptable at less than on occurrence of 3 per section of 100 microns. max. and 1 per section of max. 200 microns size

3.2.1.3. the presence of some individual salt not accepted at any size.

3.2.2. Particle size :

3.2.2.1. Titanium diboride phase (Ti B₂): TiB₂ phase (90%) less than 1 micron, 5% from (1-2 micron.) and 5% from (2-5 microns).

3.2.2.2. Titanium aluminide phase (TiAl₃):

The average particle size must be 95% with size 150 microns max. and 5% with size 200 micron max.

3.2.3. Phase distribution: Titanium diboride and titanium aluminide phases should be evenly distributed.

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3.2.4. Titanium diboride clusters:

These clusters should not exceed 5 clusters of size 10-25 microns per cross section & more than 25 microns is not allowed in any number
In longitudinal section only one cluster 45 x 10 microns max. allowed
otherwise not allowed

4. Grain Refining Requirements:

- 4.1. Fulfillment of production-line requirements
- 4.2. Standard efficiency tests.

5. Sampling

Random samples per each lot for different heat melt to examine
Metallographic requirement.

6. Packing:

- 6.1. Every pallet should contain coils of the same heat
 - 6.2. Heat number should be tagged on each coil.
 - 6.3. Supplier name should be stamped on the rod metal
 - 6.4. packing list contained an the heat melts of the lots .
- The Products and Packing must be Applying the Safety and Environment Laws.
Shipping documents must be including Material Safety Data sheet (MSDS).
Trial lot for new suppliers :180- 200 kg

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2- Aluminum -Boron master alloy

Used For Producing Aluminum -E.C Grade

1. Chemical Requirements :

1.1. The chemical composition must be as follows :

B 2.8-3.2%

1.2. The material must be based on AL 99.5% Min. purity according to A.A.STANDARD (American Aluminum Association).

2. Form: Waffle plates approx. 8kg /each .

3. Packing:

3.1. Strong seaworthy export protective packing suitable for ocean transportation and forklift handling.

3.2. Every pallet must be accompanied. with label contain: heat melt, gross weight , net weight ,supplier name and origin source.

3.3. shipment must be accompanied with quality certificate containing the following Information's.

3.3.1. Chemical analysis for each melt.

3.3.2. packing nst containing all the heat melts of the lot.

3.3.3. The Products and Packing must be Applying the Safety and Environment Laws.

- Shipping documents must be including Material Safety Data sheet (MSDS).
- Trial lot for new suppliers :1 - 2 kg

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3- Nickel master alloy

1. The chemical composition must be as follows:

Ni: 75% Min.

Fe : 0.30% Max .. , balance: flux , Na free , non - hygroscopic

Other each Impurities 0.05 % Max.

2. Form: Tabletes approx. 0.5 Kg/ each

3. Operating temp. 700- 750 C

4. Time of complete dissolution 15 minutes Max.

5. Recovery rate must be 95% Min.

6. Packing :

6.1.Strong seaworthy export protective packing suitable for ocean transportation and forklift handling.

6.2.Every pallet must be accompanied. with label contain:
heat melt, gross weight, net weight , supplier name and origin source.

6.3.shipment must be accompanied with quality certificate containing the following Information's:

6.3.1. chemical analysis for each melt.

6.3.2. packing list containing all the heat melts of the lot.

6.3.3. The Products and Packing must be Applying the Safety and Environment laws.

- Shipping documents must be including Material Safety Data sheet (MSDS).

- Trial/lot for new suppliers :1 - 2 kg

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4- AL ·SR master alloy

1. Chemical Requirements:

1.1. The chemical compellation must be al follow:

Sr 9.11 %

1.2. The material must be boud on AI 99.7% Min. purity according to A.A. STANDARD

2. Form: Waffle plates approx. 8 kg/ each .

3. Packing:

3.1. Strong seaworthy export protective packing suitable for ocean transportation and forklift handling.

3.2. Every pallet must be accompanied. with label contain:
heat melt, gross weight. net weight, supplier name and origin source.

3.3. shipment must be accompanied with quality certificate containing the following information:

3.3.1. Chemical analysis for each melt.

3.3.2. Packing list containing all the heat melts of the lot.

3.3.3. The Products and Packing must be Applying the Safety and Environment Laws.

- Shipping documents must be including Material Safety Data sheet (MSDS) .
- Trial lot for new suppliers :1-2 kg

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6- Manganese master alloy

1. Chemical Requirements:

1.1. The chemical composition must be as follows:

Mn 15% Min. Fe 0.50 % Max. Na 0.02% Max

Other Each Impurities 0.05% Max. Balance Flux Na Free, non-hygroscopic

2. Form: Tablets. In package 3 - 4 kg approx./ each package.

3. Operating temp. 650-750 C°

4. Time of complete dissolution 15 minute. Max.

5. Recovery rate must be 95% Min.

6. Packing:

6.1. Strong seaworthy export protective packing suitable for ocean transportation and forklift handling.

6.2. Every pallet must be accompanied. with label contain:

heat melt , gross weight , nit weight , Supplier name and origin source.

6.3. Shipment must be accompanied with quality certificate containing the following information:

6.3.1. Chemical analysis for each melt.

6.3.2. Packing list containing all the heat melts of the lot

6.3.3. The Products and Packing must be Applying the Safety and Environment laws.

- Shipping documents must be including Material Safety Data sheet (MSDS).
- Trial lot *for* new suppliers :1-2 kg

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9- Pure silicon metal

1. Chemical Requirements:

1.1. The chemical composition must be as follows :

SI 99.0 % Min. Ca 0.02 % Max Na 0.02 % Max

Fe 0.25 % Max. P 0.005 % Max

Other Each Impurities 0.04 % Max

2. Form: Grains with size (5-50 mm) In strong big bags weight approx. (500 kgs)/ each

3. Packing:

3.1. Strong seaworthy export protective packing suitable for ocean transportation and forklift handling (2 bags/pallet).

3.2. Every pallet must be accompanied. with label contain :

heat melt , gross weight, net weight , supplier name and origin source.

3.3. shipment must be accompanied with quality certificate containing the following information:

3.3.1. Chemical analysis for each melt .

3.3.2. Packing Ust containing all the heat melts of the lot.

3.3.3. The Products and Packing must be Applying the Safety and Environment Laws.

- Shipping documents must be including Material Safety Data sheet (MSDS)
- Trial lot for new suppliers :1- 2 kg

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14- Iron-master alloy

1. Chemical Requirements

The Chemical composition must be as follows:

Fe 75 % Min Na 0.02% Max

Balance; Fluxes Na free - non hygroscopic, Other each 0.05% Max.

2. Form: Tablets In package. 3 4 kg /each package.

3. Operating temp. 700-760 °C

4. Time of complete dissoluble: 15 minutes Max.

5. Recovery rate: must be 90 % Min.

6. Packing:

6.1. Strong seaworthy export protective packing Suitable for ocean

6.2. Every pallet must be accompanied. with label contain:

heat melt, gross weight. net weight. supplier name and origin source.

6.3. Shipment must be accompanied with quality certificate containing the following information:

6.3.1. chemical analysis for each melt.

6.3.2. Packing list containing all the heat melts of the lot

7. The products and the packing must be applying the safety and Environmental laws

- Shipping documents must be including Material Safety Data sheet (MSDS).
- Trial for new suppliers :1 -2 kg

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General Requirements

Your offer must include: -

- The name and address of the **Manufacturer and Country of Origin** to be stated.
- Please provide us your offer on your **Letter head**.
- **Validity:** Your Quotation should be valid for 90 days.
- **Delivery Period:** Please quote your best possible shipment period in your offer.
- **Deviation:** If any deviations are there, kindly indicate.
- **Technical Details:** Include Manufacturer's detailed technical specifications, drawing, catalog, leaflet etc.
- **Payment terms.**

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