

Molybdenum Titanium P/M-MoTi Powder Metallurgy Plate

Description of Product This specification covers HIP Molybdenum / Titanium Alloy Plates for sputtering applications.

Chemical Characteristics¹⁾ (Mass fraction in %)

The chemical composition of the molybdenum blended powder used for producing sheet bar shall conform to the following limits (inquire for other specific concentration):

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|----|----------------|
| Mo | Balance |
| Ti | 33.8 ± 0.4 wt% |
| Al | < 0.01 % |
| Cr | < 0.01 % |
| Cu | < 0.01 % |
| Fe | < 0.03 % |
| Ni | < 0.015 % |
| C | < 0.015 % |
| O | < 0.2 % |

Density ≥ 7.1 g/cm³

Structure Material will be supplied with a multiphase HIP structure unless otherwise specified and agreed upon between the customer and H.C. Starck.

Dimensional Tolerances Tolerances as agreed upon at the acceptance of the order.
The deviation from flatness will be determined by a straight edge across the plate and measuring the gap between the bottom of the straight edge and the plate with a taper gauge. The flatness tolerance will be agreed upon at the time of the order.

Bond Surface Machined surface will be free from cracks, embedded contamination, pits, voids, stains, abrasions, and discolorations that are detectable with an unaided eye, machined to ∇∇ surface finish.

Sputter Surface Ground surface is free from cracks, embedded contamination, pits, voids, stains, abrasions, and discolorations that are detectable with an unaided eye. Surface finish shall be ground to ∇∇∇ finish.

1) Information on testing methods on request.

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| Identification | The material will be identified with appropriate billet ID and plate number. Shipping containers will be marked with the name of the customer and the purchase order number. |
| Packaging | The molybdenum titanium plate shall be packed for shipment in accordance to customer requirements. Specifically, the molybdenum titanium plate shall be packaged in a properly labeled sturdy wood outer container closed with metal banding and fasteners. The product will be packaged in a manner to ensure protection from the environment and handling damage during transit. |
| Labeling | Labeling shall include: Shipped from Shipped to MSDS Gross wt Net wt Shop Order Number Purchase Order Number Box size Pre-cautionary Labels (e.g. Do Not Stack) |
| Certification | Certification includes: Identification (individual ingot number, sales order number) Chemistry Dimensions Weight |
| Hazards identification in Advertising (REGULATION (EC) No 1272/2008 Article 48) | none. |
| Rejection | H.C. Starck must receive written notification of rejected material with the reason for rejection. The right is reserved to inspect rejected material at customer plant for claim validation. The material may be returned only after proper authorization. |

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