

MOLYBDENUM POWDER METALLURGY PRODUCTS

Number PD-7051 Issue 0-2015-10-26

## Molybdenum Titanium P/M-MoTi Powder Metallurgy Plate

**Description of Product** This specification covers HIP Molybdenum / Titanium Alloy

Plates for sputtering applications.

## Chemical Characteristics<sup>1)</sup> (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):

Мо	Balan	се		
Ti	33.8	±	0.4	wt%
Al		<	0.01	%
Cr		<	0.01	%
Cu		<	0.01	%
Fe		<	0.03	%
Ni		<	0.015	%
С		<	0.015	%
0		<	0.2	%

**Density**  $\geq 7.1 \text{ g/cm}^3$ 

**Structure** Material will be supplied with a multiphase HIP structure unless otherwise

specified and agreed upon between the customer and H.C. Starck.

**Dimensional Tolorances** 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  $\nabla\nabla$  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  $\nabla\nabla\nabla$  finish.

<sup>1)</sup> 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 titanumim plate shall be packed for shipment in accordance to

customer requirernents. Specifically, the molybdenum titanumim plate shall be packaged in a properly labeled sturdy wood outer container closed with metal banding and fastners. 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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