

MOLYBDENUM ALLOY ODS Mo-La Powder Metallurgy Sheet 2602

Description of Product This specification covers rolled sheets of oxide-dispersion strengthened (ODS) molybdenum alloys (molybdenum and La_2O_3) at three levels of lanthana content produced from pressed and sintered powder metallurgy sheet bar.

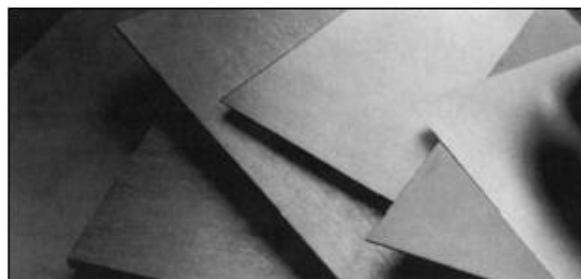
Chemical Characteristics¹⁾
 (Mass fraction in % [cg/g]; ppm [$\mu\text{g/g}$])

The chemical composition of the molybdenum blended powder used for producing sheet bar shall conform to the following limits:

Mo(By Difference)	min.	98.7	%
O	max.	0.250	%
Mg	max.	0.001	%
Mn	max.	0.001	%
Ni	max.	0.005	%
Al	max -	0.002	%
Cu	max -	0.002	%
Pb	max -	0.002	%
Ti	max -	0.002	%
Ca	max -	0.003	%
Si	max -	0.005	%
Sn	max -	0.003	%
Cr	max -	0.010	%
C	max -	0.005	%
Fe	max -	0.010	%
La (Lanthanum)		level 1: 0.2 – 0.4%; level 2: 0.5 – 0.7%; level 3: 1.0 - 1.2%	

Structure Sheet will be supplied in a stress-relieved condition unless otherwise requested.

Mechanical Properties Tensile properties can be supplied on request when Purchase Order is placed.



ODS Mo-La

1) Information on testing methods on request.

Number PD-7043
Issue 3-2015-09-22

Physical Characteristics

Thickness Tolerance:

THICKNESS (INCHES)	UP TO 12 INCHES WIDE (INCHES)	OVER 12 THRU 24 INCHES WIDE (INCHES)
0.010 to 0.018	± 0.0009	± 0.0010
Over 0.018 to 0.030	± 0.0015	± 0.0017
Over 0.030 to 0.187	± 5 %	± 6 %

Width Tolerance:

THICKNESS* (INCHES)	SLIT (INCHES)			SHEARED (INCHES)			
	.125 THRU .250	OVER .250 THRU .500	OVER .500 THRU 6	OVER 6 THRU 12	OVER 12 THRU 24	.500 THRU 12	OVER 12 THRU 24
0.010 to 0.019		± 0.010	± 0.010	± 0.010	± 0.031	± 0.031	± 0.062
0.020 to 0.034			± 0.015	± 0.015	± 0.031	± 0.031	± 0.062
0.035 to 0.059			± 0.031	± 0.031	± 0.031	± 0.062	± 0.062
0.060 to 0.069				± 0.031	± 0.031	± 0.062	± 0.062
0.070 to 0.187						± 0.062	± 0.062

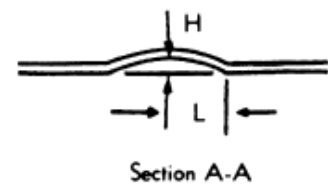
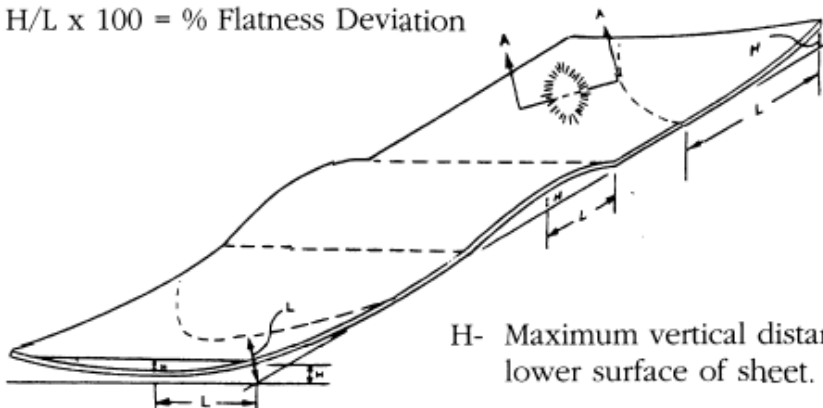
*For thickness 0.070 to 0.187 inches; sheet will be sheared, abrasive cut, band saw cut, or water jet cut to the tolerances shown.

Bedsheet is sold as a useable width, therefore any cracks or delaminations on the edges are acceptable as long as 6, 12 or 24 inch minimum width can be yielded from the material.

Length Tolerance For specified lengths, the tolerance for all sizes is + .0625 - 0 inch per foot of length. Edge Straightness-Maximum camber is .0625 inch per foot of length.

Flatness Tolerance The total deviation from flatness will not exceed 4 % maximum, as determined by the following formula:

$H/L \times 100 = \% \text{ Flatness Deviation}$



H- Maximum vertical distance between flat surface and lower surface of sheet.

L- Minimum horizontal distance between highest point on sheet and point contact with flat surface.

Number PD-7043
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Surface Condition	Sheet is supplied with a matte or bright finish to 0.030 inch thickness. A matte finish will be supplied for sheet over 0.030 inch thick. The sheet will be of uniform quality, clean, and free from foreign matter. It will be essentially free from edge delaminations as determined by visual examination with exception of bedsheet width. Normal shear tears are not considered as delaminations.
Hazards identification in Advertising (REGULATION (EC) No 1272/2008 Article 48)	none.
Identification	The material will be identified with appropriate specification number, ingot or lot number, and nominal size. Shipping containers will be marked with the name of the customer and the purchase order number.
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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