

Mo

95.95

Molybdenum

8	57
O 15.999 Oxygen	La 138.90547 Lanthanum

Molybdenum Lanthanum Oxide

Refractory Metals and Alloys

efi ED FAGAN INC.
Special Purpose Alloys
THE MATERIALS YOU NEED, WHEN YOU NEED THEM

www.edfagan.com | sales@edfagan.com
toll free 800.348.6268

DESCRIPTION

Molybdenum lanthanum oxide is often the alloy of choice when embrittlement after recrystallization must be avoided along with assurance of dimensional shape stability at high-temperatures.

Small amounts of lanthanum oxide particles (0.3-0.7%) are combined with molybdenum to create a special stacked fiber microstructure that is stable at temperatures up to 2000°C. This alloy known as molybdenum lanthanum oxide or ML increases the recrystallization temperature to 1300°C (90% def). After recrystallization the elongated grain structure with jagged grain boundaries provides a measurable increase in ductility and creep resistant strength than that of the pure molybdenum.

APPLICATIONS

Medical devices, high temperature vacuum furnace fixtures, furnace parts, stranded wires, sintering and annealing boats, lighting retaining and feed wires, evaporation coils, research, aerospace components.

TYPICAL PHYSICAL PROPERTIES

Density	lb/in ³	0.376
	gm/cm ³	10.30
Melting Point	°F	4748
	°C	2620
Electrical Resistivity	Micro-ohm-cm	5.17
Thermal Conductivity	Cal/cm ² /cm°C /sec	0.35
Specific Heat	Cal/gm / °C	0.061
Recrystallization Temp	°C (90% def)	1300
Coefficient of Linear Thermal Expansion	Micro-in/ °F x 10 ⁻⁶	4.90
	Micro-in/ °C x 10 ⁻⁶	2.70

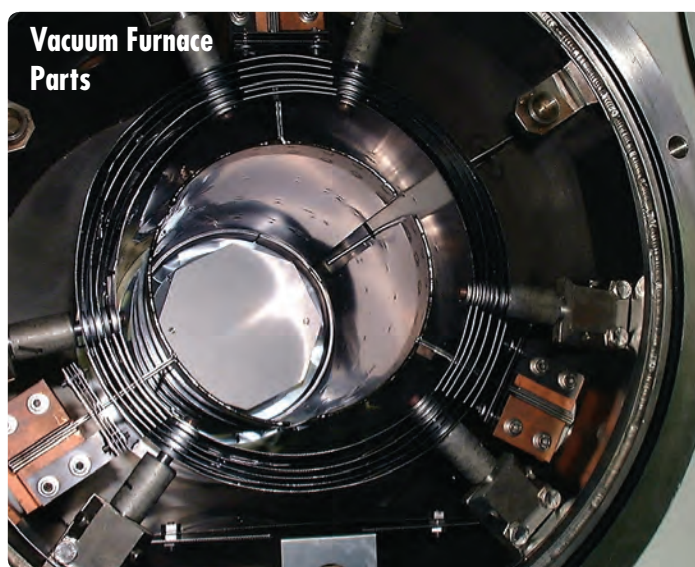
FORMS | SIZES AVAILABLE

Sheet 0.010" - 0.125"

If you do not see the size you require listed above, please call us at 800-348-6268. We can custom stock products in the size you require. No order is too small.

TYPICAL MECHANICAL PROPERTIES

Tensile Strength (2mm Sheet; Longitudinal Direction)	KSI (MPa)-20 °C	70 (480)
	KSI (MPa)-1000 °C	22 (150)
	KSI (MPa)-1400 °C	12 (80)
Elongation (@20°C)	%	15
Typical Hardness	DPH/RC	230
Modulus of Elasticity	KSI (GPa)	46 (310)



CHEMISTRY %

99.30 - 99.70 Molybdenum (Mo) 0.3 -0.7 Lanthanum Oxide (La₂O₃)

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Special Purpose Alloys & Metals From Stock

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Controlled Expansion | Glass Sealing

Ed Fagan Inc. supplies the highest quality metals and alloys including materials from Carpenter Technology Corp.

Kovar® | ASTM F15 Alloy

Forms: Plate, Round Bar, Sheet, Strip/Coil, Wire
Trade Names: Kovar®, Pernifer® 2918, NILO K®, DilverP1®

Alloy 42/46/48/52

Forms: Plate, Round Bar, Sheet, Strip/Coil, Wire
Trade Names: Pernifer®40, 46, 48, 50; NILO® 42, 46, 48, 50; Glass Seal 42, 46, 48, 50

Free-Cut Invar "36"® Alloy

Forms: Round Bar, Wire

Invar "36"® Alloy

Forms: Plate, Sheet
Trade Names: Pernifer® 36, NILO® 36, Invar

Super Invar 32-5®

Forms: Plate, Round Bar, Sheet

Refractory Metals and Alloys

Ed Fagan Inc. is your leading source for quality refractory metals and alloys. We stock Tungsten, Molybdenum and its alloys in various forms and sizes manufactured from Plansee Group.

Molybdenum

Forms: Plate, Precision Cut Wire, Round Bar, Sheet/Strip, Spooled Wire, Threaded Rod/Nuts

Molybdenum Lanthanum Oxide (ML)

Forms: Sheet – Stress Relieved, Recrystallized

Molybdenum TZM

Forms: Plate, Round Bar

Niobium

Forms: Plate, Round Bar, Sheet, Strip/Coil, Wire

Rhenium

Forms: Plate, Round Bar, Sheet, Strip/Coil

Tantalum

Forms: Round Bar, Sheet

Tungsten

Forms: Parts (To Specification), Plate, Precision Cut Wire, Round Bar, Sheet

Tungsten Alloy

Blank Forms: Flats, Parts, Plate/Sheet, Rod, Shapes

Soft Magnetic Alloys | EMI Shielding & Laminations

Ed Fagan Inc. is a distributor of "EMI shielding alloys" for VDM Metals GmbH the world's leading producer of these alloys.

EFI Alloy 50

Forms: Round Bar, Square Bar, Strip/Coil, Wire
Trade Names: Alloy 4750, High Permeability 49®, Magnifer® 50

EFI Alloy 79

Forms: Rectangular Bar, Round Bar, Sheet, Strip/Coil, Wire
Trade Names: Hipernom, HyMu80®, Magnifer® 7904, Molypermalloy, Permalloy 80®

Hiperco® 50, Hiperco® 50A, Hiperco® 50 HS

Forms: Plate, Round Bar, Strip/Coil

Carpenter VimVar Core Iron

Forms: Plate, Round Bar

Electrical & Electronic Nickels

Ed Fagan Inc. supplies select, commercially pure grades of Nickel in various forms and sizes.

Electronic Nickels

200/201/205/233/270

Forms: Round Bar, Sheet, Strip/Coil, Wire

Alloys and Metals We Distribute

Corrosion Resistant Alloys • High-Temperature Alloys • Stainless Steel
• Titanium – CP, 6 Al-4V

Ed Fagan Inc. Services

Slitting, Shearing, Saw Cutting, Grinding, Water Jet Cutting, Laser Cutting,
Custom Stocking and Consignment Programs

JUST-IN-TIME DELIVERY: All of our **standard stock** items can be **shipped within 24-hours** of your order confirmation and most are **shipped the same day**. All materials certified with shipment. For special orders and non-stock materials, contact our sales team for our competitive pricing and delivery lead times.

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