

MOLYBDENUM WIRE



DESCRIPTION

Molybdenum, with a melting point of 2622° C (4720°F) is one of the better known and most widely used of the refractory metals. In the form of wire, it is used in many applications requiring its special properties. These include strength at high temperatures, low thermal expansion and a high melting point. Molybdenum also has low vapor pressure, better than average electrical conductivity and is relatively easy to machine and shape.

Molybdenum wire, as defined by General Electric

Company, is "drawn" molybdenum with a circular cross section. It is packaged and shipped either as self-contained coils or wound on shipping containers such as spools, reels or bands. The product is available from stock in sizes 2.0 through 250 mils. Sizes from 1 mil to 2.0 mils are produced on special request only. Sizes above 250 mils or cut lengths greater than 20 mils in diameter and over 12 inches in length are generally classed as rod. Cut lengths under 12 inches in any diameter are considered fabricated parts.

MOLYBDENUM WIRE FOR A VARIETY OF APPLICATIONS

An ever widening circle of uses has opened for high purity molybdenum wire. The highly specialized nature of numerous applications requires not only great care in manufacture, but also in many cases added processing to insure performance under demanding service conditions. Most products described in this catalog are made of Type R molybdenum, but GE also offers Type KW and clad wires to meet special needs.

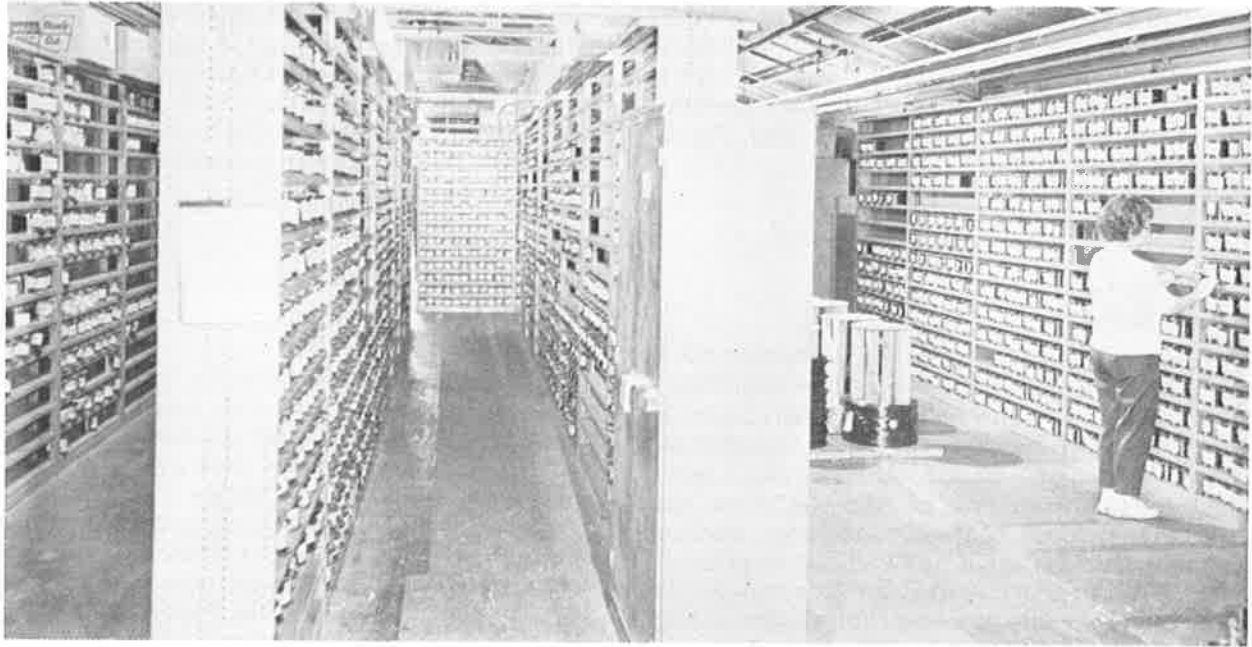
Type R wire is made from high-purity (99.95% min.) molybdenum, which is most suitable for a wide range of fabrications and applications. As customer applications become more stringent, the product and processing requirements become increasingly more demanding and, ultimately, more expensive. KW molybdenum wire is made from the same high-purity material but has received additional treatment to impart higher recrystallization temperature and about 40% higher tensile strength at elevated temperatures. This product is especially useful in applications where retardation of recrystallization is necessary, where higher tensile strengths at elevated temperatures are required, and where a higher degree of room temperature stiffness is important. In contrast with Type R, KW moly wire exhibits better room temperature ductility after cycling through elevated temperatures.

Type R and Type KW wire are available in two types of packages. In most cases, customers prefer spooled wire on appropriate containers, or as self-supporting coiled wire in sizes above .030 inch diameter. In these forms, wire is generally available in a range of diameters from 2.0 through 250 mils. In other situations, it may be more

advantageous, more convenient, and less expensive to use precut wires, or straight lengths of wire. Cut pieces are available in the same mil range as coiled wire and in lengths up to 20 feet. The more important types of molybdenum wire are summarized below.

TABLE I—TYPES OF GENERAL ELECTRIC MOLYBDENUM WIRE

TYPE	DESCRIPTION	PRINCIPAL APPLICATIONS
R	Pure molybdenum wire—99.95 percent minimum—which is General Electric's regular, high-quality wire.	<ul style="list-style-type: none">• supports for lamps and electronic tubes• mandrels for tungsten coil winding• furnace windings• spray metallizing• formed wire parts• ribbon
KW	Modified, high-quality molybdenum wire with a higher recrystallization temperature than that for Type R.	<ul style="list-style-type: none">• supports and leads for lamps and electronic tubes• formed wire parts• helix ribbon



Complete stocks of standard wire sizes and types are kept ready for shipment in GE's wire plant storage facility, part of which is shown above.

1. Support Wire for Lamps and Electronic Tubes

Support wire, used for holding filaments in lamps, is shown on the cover of this catalog in some of its more common shapes. Requirements include straightness, roundness, cleanliness, and ductility. These are important for optimum support in the finished lamp or tube and for adaptability to automatic manufacturing techniques used to form the support. For maximum efficiency in automatic operations, General Electric supplies support wire in long lengths accurately wound on returnable containers that are carefully maintained. Support wires are available in either Type R or Type KW. From 3 mils up to 7 mils support wire is normally furnished in Type R wire, with Type KW furnished on special request. From 7 mils through 30 mils support wire is normally supplied in Type KW, with Type R furnished on request. (Product Data Sheet 2300-b)

2. Mandrels for Tungsten Coil Winding

Molybdenum mandrel wire is used for coil winding of tungsten lamp filaments to prevent coil contamination as well as to control the tungsten coil spacing and overall contraction. In applications where high temperatures are used to anneal the coils, molybdenum wire is essential as the mandrel wire. The stability of GE molybdenum during coil heat-treating makes it especially suitable for mandrel use in winding either single-coil

or multiple-coil tungsten filaments. Mandrel wire is made from Type R wire, and every reel is tested for mandrel quality after it has been drawn to size. Process controls and final wire dimensions are strictly adhered to in order to assure close compliance to the limits imposed on filament construction. Standard diameters range from 2.0 mils through 30 mils, but smaller or larger sizes may be ordered. End-to-end uniformity of mandrel wire on each container is essential. In sizes through 14 mils, end-to-end rate variation is held to 1% maximum. Spool labels show the rating of the inside end of the wire and the outside end of the wire. Aside from having the correct size, the most important dimensional feature of mandrel wire is roundness. Moly mandrel wire is round within 2%, that is, the difference between the larger and the smaller diameters of the wire does not exceed 2% of the larger diameter. (Product Data Sheet 2300-a)

3. LGM Wire

The initials stand for "line-ground" and "magnatested" wire, used when a high degree of surface soundness is required. Available as either Type R or Type KW, the wire goes through a special grinding operation at a specified point in the manufacturing process to improve surface soundness, surface geometry, and cleanliness.

Electronic magnatesting assures surface soundness to a specified level. These special properties are needed when such operations as tight radius bending, flattening, threading and other machining operations are performed on the wire. (Product Data Sheet 2300-j)

4. Side Rods

Molybdenum side rods used in electronic tube grid fabrication are available in three materials, Type R, Type KW and nickel-clad molybdenum wire, and in two finishes, hot-drawn and electro-cleaned and diamond die drawn at room temperature. Characteristics of side rod wires are tight dimensional control, roundness, surface geometry, surface finish, and surface cleanliness. Every coil of wire intended for side rod use is made from specially processed and electronically selected stock in order to meet the high degree of surface soundness and tensile strength required. When an application requires moly with higher recrystallization temperature and elevated temperature tensile strength, Type KW side rod wire is recommended.

For oxidation resistance and enhanced cross-weld strength, nickel-clad moly side rod wire should be specified.

Nickel-clad side rod is available only as a diamond die finished product. The outer portion of the composite is a 99.00% minimum nickel (plus cobalt) material, commercially known as Electronic Grade Nickel 200.

Processing and cladding operations are designed to provide a nickel outer sheath of 17% minimum nickel, by weight, or, nominally, 5% of the wire diameter. In addition, processing variables and thermal treatments are controlled so that the nickel outer sheath adheres tightly to the moly core, forming a metallurgical bond. This nickel-clad side rod will withstand normal fabrication operations without cracking, peeling, or separation of the nickel sheath from the core. The uniform, heavy nickel coating provides oxidation resistance during storage, processing, and use, in addition to enhancing the cross-weld strength in frame grid manufacture. (Product Data Sheets 2300-e & 2300-f)

5. Other Applications

Molybdenum wire is also used for furnace windings and other specialized uses. The furnace windings are for high-temperature electric furnaces which operate with an inert or reducing-gas atmosphere or vacuum.

Molybdenum wire also is used as a starting material for the manufacture of special parts for lamps, electronic tubes, and other devices. The type of wire and its finish vary for different applications. For lamp and electronic tube applications a cleaned finish is usually specified. (Product Data Sheet 2300-k)

6. Molybdenum Ribbon

A related product, molybdenum flattened wire ribbon, is used in power tubes, receiving tubes, relays and other lamp and electronic applications. Specific uses include cross straps in frame grids, lead-ins, tabs, conductive high-temperature or corrosion-resistant springs, traveling wave tube helices, and many others. Ribbon is made by flattening specially-processed wire in a rolling mill. Three types are available, Type R, Type KW, and nickel-clad molybdenum ribbon (Product Data Sheet 2300-h). Nickel-clad molybdenum ribbon is made from nickel-clad wire having an outer sheath of a 99.00% minimum nickel (plus cobalt) material.

Molybdenum ribbon has a cross section with slightly rounded edges, as compared to the square edge of material slit from sheet. Rolled ribbon is available in much longer lengths than slit sheet, making it especially attractive for continuous production operations. Standard dimensional tolerances for rolled ribbon are tighter than those of slit sheet. (Product Data Sheet 2300-g)

TABLE II

Standard Wire Tolerances

Standard diameter tolerances for Type R molybdenum wire on spools is:

Below 30 mills, $\pm 4\%$ by weight, with tolerances of $\pm 3\%$, $\pm 2\frac{1}{2}\%$, $\pm 2\%$, $\pm 1\frac{1}{2}\%$, $\pm 1\%$ available.

30 mills and above, $\pm 2\%$ by diameter, with tolerances of $\pm 1\frac{1}{2}\%$, $\pm 1\%$ available.

STANDARD FINISHING PROCESS DESIGNATIONS

Each type of GE molybdenum wire—R and KW—may be varied for different applications by the kind of processing it undergoes in manufacture. The standard process designations listed below are available as indicated for each type of wire. GE engineers will be happy to discuss other wire conditions that may be desirable in fulfilling the requirements of your particular application.

TABLE III
STANDARD PROCESS DESIGNATION

Standard Process Designation	Description	Straightness	Tensile Strength	Availability of Sizes By Type	
				R	KW
D	Process D is as-drawn wire and has a residual surface coating of the drawing lubricant. In Type R it is generally specified for mandrels, furnace windings, and spray metallizing. In the KW type it is used for supports.	As-drawn	High	2.0 mils* through 250 mils	3.5 mils through 250 mils
C	Process C is Process D wire which has been subjected to an intermediate anneal, removing most of the drawing lubricant. It is generally specified for mandrels.	Medium	Medium	2.0 mils* through 187.5 mils	None
CA	Process CA is Process D wire which has been subjected to a final anneal, removing the visible lubricant. In Types R and KW, which are generally specified for supports and fabricated parts, it is processed to achieve a relatively high standard of straightness.	Maximum	Low	2.0 mils* through 187.5 mils	3.5 mils through 187.5 mils
EC	Process EC is Process D wire which has been electrolytically etched to remove visible lubricant and underlying oxides. The high tensile, low ductility properties of the D wire remain unchanged.	As-drawn	High	2.0 mils* through 187.5 mils	3.5 mils through 187.5 mils

*1 mil to 2.0 mils available on request.

TABLE IV — STANDARD MOLY

	Special Characteristics	Type	Form	Diameter	Length (CW Only)
1. Regular Wire (PDS 2300-k)	Designed for general fabrication use, furnace supports and windings, electrode contacts, formed wire parts, etc.	R	SW (Spooled Wire) and CW (Cut Wire)	.002 in. * to .250 in.	Specified lengths, or random lengths, from 1 foot through 20 feet available in diameters through 20 mils. Standard cut length tolerance $\pm 1/16$ in.
2. Line Ground and Magnatested Wire (PDS 2300-j)	Specially processed to improve surface properties; designed for tight radius bending, flattening and machining operations.	R			
3. KW Wire (PDS 2300-b)	Special treatment to increase recrystallization temperature and high temperature tensile strength.	KW		.0035 in. to .250 in.	
4. Line Ground and Magnatested KW Wire (PDS 2300-j)	See lines 2 and 3 above.	KW			
5. Support Wire (PDS 2300-b)	Controlled thermal treatments for improved cleanliness, straightness, and controlled tensile strength,	R or KW	SW (Spooled Wire) only	.003 to .007 in. (normally R) .007 to .030 in. (normally KW)	Not available in cut lengths
6. Mandrel Wire (PDS 2300-a)	Processed and tested for mandrel quality.	R		.002 to .030 in.	
7. Side Rod Wire (PDS 2300-e)	Furnished cold drawn or hot drawn finish. Tested for side rod quality.	R	SW (Spooled Wire) and CW (Cut Wire)	.027 to .045 in. (diamond die) .045 to .065 in. (carbide die)	Usually 10 feet, but random lengths available Standard cut length tolerance $\pm 1/16$ in.
8. KW Side Rod Wire (PDS 2300-e)	See lines 3 and 7 above.	KW			
9. Nickel-Clad Side Rod Wire (PDS 2300-f)	Nickel outer sheath of nominal 5% of wire diameter provides oxidation resistance and enhanced cross-weld strength.	NC		.027 in. to .045 in. (diamond die only)	
10. Flattened Wire Ribbon (PDS 2300-g)	Specially-processed, electronically-selected wires flattened in special rolling mills.	R	SR (Spooled Ribbon) or CR (Coiled Ribbon)	Thickness: .0015 to .0200 in. Width: .025 to .500 in.	Standard cut length tolerance $\pm 1/32$ in.
11. Nickel-Clad Ribbon (PDS 2300-h)	See lines 9 and 10 above.	NC			

*1 mil to 2.0 mils available on request.

BDENUM WIRE AVAILABILITY

Surface Finish	Nominal Tolerances	Physical Properties	Ordering Dimensions
D, C & EC Note: LGM is available in C and EC finish through .1875 in. dia. only.	±4% below 20 mils. ±2% above 20 mils. Closer tolerances down to ±1% available.	Room temperature tensile strength and % elongation vary as a function of the wire diameter. In general, the tensile strength is high and elongation low in as-drawn wire. Special tempers are available to meet the specific applications or specifications.	Wire should be ordered by milligram rating below 30 mils, and by mils 30 mils and above. When ordering by milligram rating, the minimum and maximum of a range should be specified. Normally, the milligram rating of the center size is stipulated along with the percentage tolerance for the range. The following formulas may be useful in converting between milligram ratings and diameter in mils (based on ASTM density of 10.14 gms./cm. ³): Milligrams per 200 mm. = 1.028 X (Dia. in Mils) ² Diameter in Mils = .986 $\sqrt{\text{Mgs./200mm.}}$
CA		Room temperature tensile strength 44/55 gms./mg./200 mm	
D, C, EC	Normally ±4% but to ±1% available.	Room temperature tensile strength 55/65 gms./mg./200 mm	
Diamond die drawn and degreased (DD); carbide die, D and EC.	As negotiated	Room temperature tensile strength 50/60 gm./mg./200 mm.	Side rod wire is customarily ordered by specifying the nominal dia., and the tolerances, in decimals, to four places. For example, .0315 in. dia., ±.0003 in. Length dimensions and tolerances for cut wires are normally specified in feet and/or inches and/or decimals, as appropriate.
Drawn and degreased (DD).		Room temperature tensile strength 55/65 gm./mg./200 mm.	
		Room temperature tensile strength 45/55 gm./mg./200 mm.	
Black (as-rolled) or bright (cold-rolled, cleaned, smooth and sound).	Depends on cross-section: Thickness, ±.0002 in. to ±.002 in.	Tensile strength and elongation are functions of the temper desired in the finished ribbon. Tempers available can range from an as-rolled condition to a soft-annealed condition.	Flattened wire ribbon is customarily ordered by specifying thickness and width in decimals, to three or four places, as required. Tolerances are normally specified in decimals, to four places.
Bright only.	Width, ±.001 in. to ±.010 in.		

MANUFACTURING AND QUALITY CONTROL

General Electric Company manufactures molybdenum wire using powder metallurgy techniques to produce high quality starting ingots. These are worked down by successive heating and diameter reduction steps into rod, then drawn into finished wire through a series of tungsten carbide and diamond dies. Each type of wire is made to rigid internal specifications which have been developed to meet the requirements of applications described earlier.

Quality control and inspection techniques are used to check wire elongation, tensile strength, straightness, roundness, size, and purity. Also, wire wound on shipping containers is checked to make certain that it is wound properly and metered accurately.

Weighing and Rating of Molybdenum Wire

In sizes below 30 mils, wire is normally weighed and rated in milligrams per 200 millimeters. Precision torsion balances, carefully maintained, are used in weighing molybdenum wire. Weighing precision is shown in Table V.

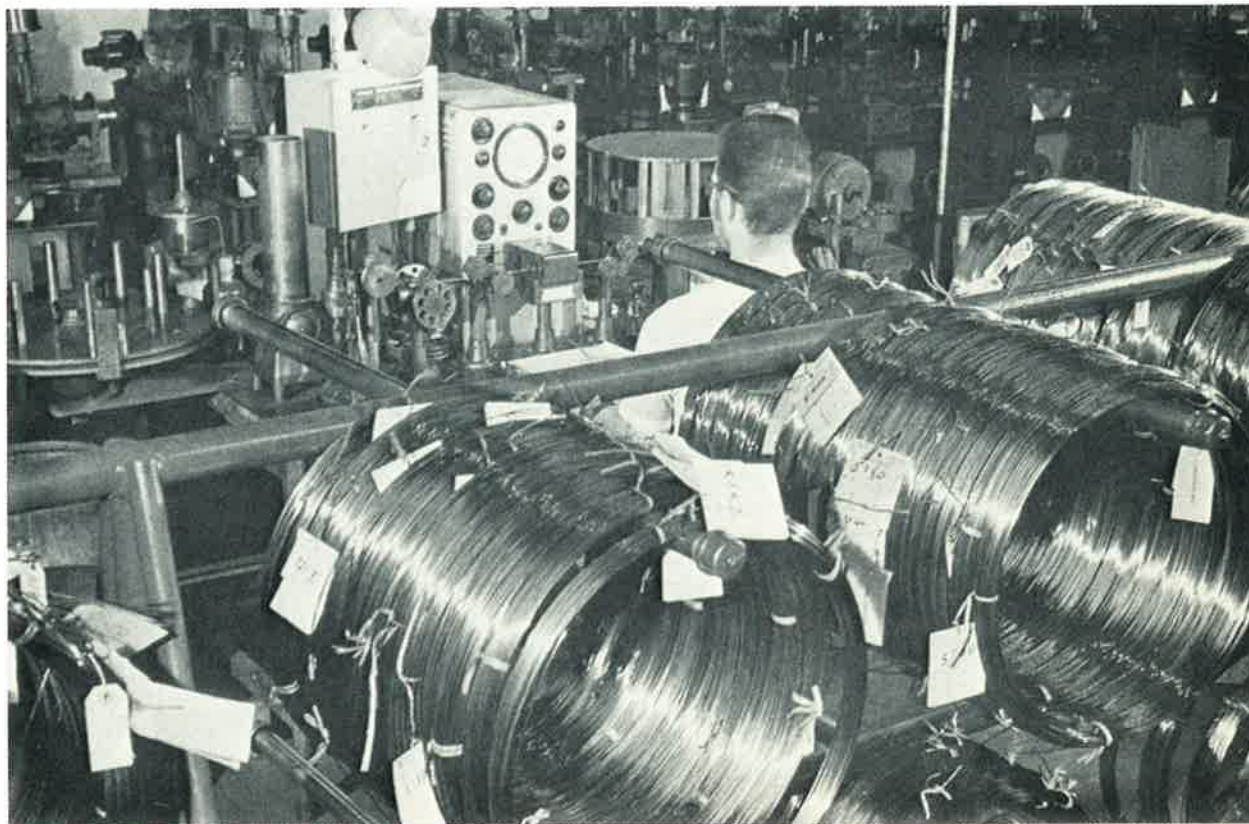
Rating of molybdenum wire is performed with

TABLE V

SIZE RANGE, mg/200 mm	WEIGHING PRECISION
below 60	nearest 0.01 mg
60 through 250	nearest 0.2 mg

accuracy and precision by experienced operators specifically trained for this important function. Balances are of the most accurate and dependable type available and are carefully maintained. A wide range of sizes is normally rated, with individual balances being used only for a small portion of the total size range. Cutting blocks are designed to cut wire precisely to a 200 millimeter length, using slight tension on the wire.

Constant checks are conducted to maintain accuracy of the system. Balances are always calibrated at the nearest point to the wire size being weighed, and the working calibration weights are frequently checked against standards of the National Bureau of Standards.



The Magnatester uses eddy current principles to detect splits in the wire. As the picture indicates, this is an in-process quality audit. In the foreground are completed and tagged coils, while wire drawing equipment is shown in the background. Magnatestering is performed as a 100% inspection on line-ground and magnatestered wire.



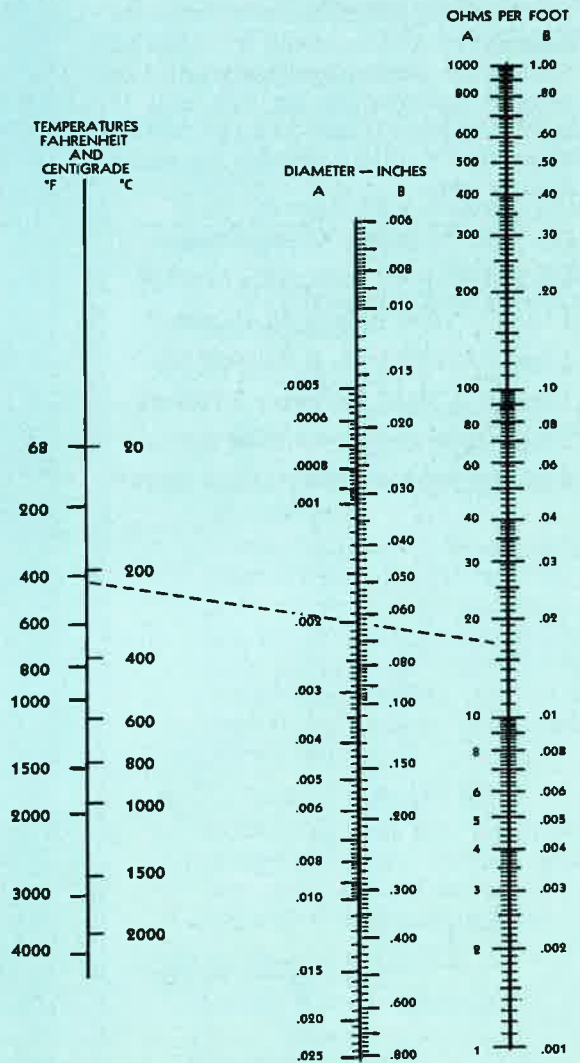
These Instron Testers located on the shop floor measure tensile properties of the various molybdenum wires and assure conformance to internal specifications. Periodic maintenance, calibration and certification by Instron engineers assure equipment integrity.



Rating is an operation whereby diameter of the wire is checked by weighing a sample of predetermined length (mg/200mm). The measurement is made with an automatic electrobalance unit equipped with a direct readout (digital) voltmeter. These units accurately detect weight changes of 2×10^{-7} grams.

TABLE VI

**NOMOGRAPH RELATING
TEMPERATURE/DIAMETER/RESISTANCE**



SIZE SPECIFICATION

TABLE VII

Tolerances

Below 30 mils the standard tolerance, based on size expressed in milligrams per 200 millimeters is $\pm 4\%$. Other tolerances available are $\pm 3\%$, $\pm 2\frac{1}{2}\%$, $\pm 2\%$, $\pm 1\frac{1}{2}\%$, and $\pm 1\%$ by weight.

In sizes 30 mils and larger the standard tolerance, based on size expressed in mils, is $\pm 2\%$. Other available tolerances are $\pm 1\frac{1}{2}\%$, $\pm 1\%$. For 20 mils through 35 mils a $\pm \frac{1}{2}\%$ tolerance is available on special request.

Size-Weight Relationship of Molybdenum Wire

Theoretical density of molybdenum:

10.14 grams per cubic centimeter recommended and followed by American Society for Testing and Materials. Conversion information on this and the adjoining page is based on calculations using this standard density for molybdenum wire.

$$\text{Dia., mils} = 0.986 \sqrt{\text{mg}/200\text{mm}}$$

$$\text{Mg}/200 \text{ mm} = 1.028 \times (\text{dia., mils})^2$$

$$1 \text{ inch} = 1000 \text{ mils} = 25.40 \text{ mm}$$

$$1 \text{ mm} = 39.37 \text{ mils} = 0.03937 \text{ in.}$$

$$1 \text{ meter} = 39.37 \text{ inches} = 3.28 \text{ feet}$$

$$1 \text{ kg} = 1000 \text{ grams} = 2.2046 \text{ pounds}$$

$$1 \text{ pound} = 16 \text{ ounces} = 453.6 \text{ grams}$$

SIZE-WEIGHT RELATIONSHIP OF
MOLYBDENUM WIRE
2.0 THROUGH 30.0 MILS

Dia. In Mils	Milli-grams Per 200 Milli-meters	Diameter In Milli-meters	Grams/1000 Meters	Meters/Kilogram	Feet/Kilogram
2.0	4.11	0.0508	20.55	48,662	159,611
2.5	6.42	0.0635	32.10	31,153	102,182
3.0	9.25	0.0762	46.25	21,622	70,919
3.5	12.59	0.0889	62.95	15,886	52,105
4.0	16.44	0.1016	82.20	12,165	39,901
4.5	20.81	0.1143	104.05	9,611	31,524
5.0	25.70	0.1270	128.50	7,782	25,525
5.5	31.09	0.1397	155.45	6,433	21,100
6.0	37.00	0.1524	185.00	5,405	17,728
6.5	43.43	0.1651	217.15	4,605	15,105
7.0	50.37	0.1778	251.85	3,971	13,024
7.5	57.82	0.1905	289.10	3,459	11,346
8.0	65.79	0.2032	328.95	3,040	9,971
8.5	74.27	0.2159	371.35	2,693	8,833
9.0	83.26	0.2286	416.30	2,402	7,879
9.5	92.77	0.2413	463.85	2,156	7,072
10.0	102.80	0.2540	514.00	1,946	6,381
11.0	124.38	0.2794	621.90	1,608	5,274
12.0	148.03	0.3048	740.15	1,351	4,431
13.0	173.73	0.3302	868.65	1,151	3,775
14.0	201.48	0.3556	1,007.40	992.6	3,256
15.0	231.30	0.3810	1,156.50	864.6	2,836
16.0	263.16	0.4064	1,315.80	759.9	2,492
17.0	297.09	0.4318	1,485.45	673.1	2,208
18.0	333.07	0.4572	1,665.35	600.4	1,969
19.0	371.10	0.4826	1,855.50	538.9	1,768
20.0	411.29	0.5080	2,056.45	486.2	1,595
21.0	453.34	0.5334	2,266.70	441.1	1,447
22.0	497.55	0.5588	2,487.75	401.9	1,318
23.0	543.81	0.5842	2,719.05	367.7	1,206
24.0	592.12	0.6096	2,960.60	337.7	1,108
25.0	642.49	0.6350	3,212.45	311.2	1,021
26.0	694.92	0.6604	3,474.60	287.8	944
27.0	749.41	0.6858	3,747.05	266.8	875
28.0	805.95	0.7112	4,029.75	248.1	814
29.0	864.54	0.7366	4,322.70	231.3	759
30.0	925.19	0.7620	4,625.95	216.1	709

TABLE VII

HOW TO ORDER**SIZE-WEIGHT RELATIONSHIP OF
MOLYBDENUM WIRE
35.0 THROUGH 250.0 MILS**

Dia. in Mils	Diameter in Milli- meters	Grams/ Foot	Grams/ Meter	Meters/ Kilogram	Feet/ Kilogram
35.0	0.8890	1.91	6.29	158.81	520.89
40.0	1.0160	2.51	8.22	121.59	398.81
45.0	1.1430	3.17	10.41	96.06	315.07
50.0	1.2700	3.92	12.85	77.82	255.25
55.0	1.3970	4.74	15.55	64.31	210.93
60.0	1.5240	5.64	18.50	54.04	177.26
62.5	1.5875	6.12	20.08	49.81	163.37
70.0	1.7780	7.68	25.19	39.70	130.23
80.0	2.0320	10.03	32.90	30.40	99.71
90.0	2.2860	12.69	41.63	24.02	78.78
100.0	2.5400	15.67	51.40	19.46	63.81
125.0	3.1750	24.45	80.18	12.47	40.91
150.0	3.8100	35.26	115.65	8.65	28.36
175.0	4.4450	47.99	157.41	6.35	20.82
187.5	4.7625	55.16	180.93	5.53	18.15
200.0	5.0800	62.68	205.60	4.86	15.95
250.0	6.3500	97.94	321.25	3.11	10.21

Specify

- QUANTITY:**
In meters — from 2.0 through 30
mils
In kilograms — from 30 through
250 mils
- TYPE:**
R or KW
- STANDARD FINISH PROCESS
DESIGNATION:**
D, C, CA or EC
- CENTER SIZE:**
In mils or mg/200 mm — from 2.0
through 30 mils
In mils — from 30 through 250
mils
- TOLERANCE:**
By milligram weight: ± 4 , ± 3 ,
 $\pm 2\frac{1}{2}$, ± 2 , $\pm 1\frac{1}{2}$, or ± 1 — from 2.0
to 30 mils
By diameter tolerance: ± 2 , $\pm 1\frac{1}{2}$ or
 ± 1 for 30 mils and larger
For 20 mils through 35 mils a
 $\pm \frac{1}{2}\%$ tolerance is available on special
request.
- CONTAINERS:**
See "Package Information" on
following page.
- DEPARTMENT SPECIFICATION
NUMBER:**
State Department Specification
Number for product desired, to
prevent error and secure best
quality product for the applica-
tion. (Department Specification
for product desired may be ob-
tained by request to address
shown below.)
- OTHER INFORMATION:**
Customer end use (supports,
grids, mandrels, furnace wind-
ings, etc.), special containers and
other pertinent instructions.

SEND ORDER TO

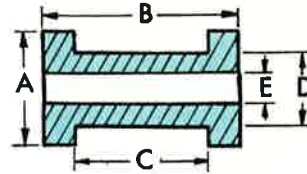
General Electric Company
Dover Wire Plant
200 West Broadway
Dover, Ohio 44622

PACKAGE INFORMATION

Specific information is provided on each container or coil of molybdenum wire. For example, each label or tag indicates type of wire, quantity in meters or kilograms, size in milligrams per 200 millimeters or in mils, metal lot number, specification number, letter code, date of packaging, and customer's order number. This information is backed by records of a rigid quality control system and makes possible positive identification of every piece of wire manufactured by General Electric. It is recommended that identify-

STANDARD SHIPPING CONTAINERS

Designation of Container Dimensions



ing labels or tags be kept with the wire in storage or in use so that identification always will be possible.

Name	Mat'l	GE Dwg. No.	Approx. Wt. Grams	Flange Dia. A	Width B	Trav's C	Barr'l D	Arbor Hole E	Wire Size Range Mils
Mandrel Spool	Alum.	A 3580	302	3/4	2 1/4	1 5/8	1 3/4	1	2.0 thru 12.0 Black or cleaned Mandrel only*
Mandrel Spool	Lexan	—	182	3/4	2 1/4	1 5/8	1 3/4	1	2.0 thru 12.0 Black or cleaned Mandrel only*
Regular Bands	Cad. Plated Steel	A 1773	198	4 3/4	1 1/2	1	4	3 7/8	12.1 thru 30.0 Black or cleaned Mandrel or support Subject to 15% rewind charge
Special Bands	Cad. Plated Steel	A 3222	65	4 1/4	7/8	1 3/16	3 27/32	3 25/32	2.0 thru 12.0 Support wire only* Subject to 15% rewind charge
Special Lexan Bands	Lexan	601-C-136	37	4 7/16	1	1 3/16	3 31/32	3 25/32	2.0 thru 12.0 Support wire only* Subject to 15% rewind charge
4K Spool	A B S Plastic	—	580	6	3 13/16	3	4 3/8	5/8	2.0 thru 16.0 CA, C, and D wire Mandrel or support wire.
6K-Alum. Reel	Alum.	—	875	7	3 3/4	3	3 1/2	5/8	16.1 thru 45.0 CA, C, and D wire Mandrel or support wire
16" Coil				Self-Supporting					30 thru 125—Black 30 thru 90—Clean
20" Coil				Self-Supporting					90 thru 187.5 Clean only
4' Coil				Self-Supporting					100 thru 249 Black only
5' Coil				Self-Supporting					250 Black only

*Mandrel Spools and Special Bands, either Metal or Lexan (plastic) at GE option.

ENGINEERING ASSISTANCE AVAILABLE

General Electric invites inquiries for molybdenum wire to suit special needs and applications. For the most satisfactory handling, an inquiry should be accompanied, if possible, by an

explanation of the desired properties and intended use of the wire. Write or call Dover Wire Plant, 200 West Broadway, Dover, Ohio 44622. Tel: (216) 343-8841.