

Nickel 212 (W. Nr. 2.4110) is wrought nickel strengthened with an addition of manganese. The product is used for electrical and electronic applications such as lead wires, supporting components in lamps and cathode-ray tubes, and electrodes in glow-discharge lamps.

## Physical Constants & Thermal Properties

**Table 2** - Physical Constants & Thermal Properties

Density, lb/in <sup>3</sup> .....	0.320
g/cm <sup>3</sup> .....	8.86
Melting Range, °F.....	2615-2635
°C.....	1435-1446
Specific Heat, Btu/lb•°F.....	0.103
J/kg•°K.....	430
Coefficient of Expansion, 68-212°F, 10 <sup>-6</sup> in/in•°F.....	7.2
20-100°C, μm/m•°C.....	12.9
Thermal Conductivity, Btu•in/ft <sup>2</sup> •h•°F.....	305
W/m•°C.....	44.0
Electrical Resistivity, ohm•circ mil/ft.....	.66
μohm•m.....	0.109

**Table 1** - Limiting Chemical Composition, %

Nickel (Plus Cobalt).....	97.0 min.
Manganese.....	1.5-2.5
Iron.....	0.25 max.
Carbon.....	0.10 max.
Copper.....	0.20 max.
Silicon.....	0.20 max.
Magnesium.....	0.20 max.

## Available Products and Specifications

Nickel 212 is designated W. Nr. 2.4110 and is available as wire.

Major specifications:

DIN 17741, 17750-17753

**Nickel 212**





www.specialmetals.com



## U.S.A. Special Metals Corporation

### Billet, rod & bar, flat & tubular products

3200 Riverside Drive  
Huntington, WV 25705-1771  
Phone +1 (304) 526-5100  
+1 (800) 334-4626  
Fax +1 (304) 526-5643

### Billet & bar products

4317 Middle Settlement Road  
New Hartford, NY 13413-5392  
Phone +1 (315) 798-2900  
+1 (800) 334-8351  
Fax +1 (315) 798-2016

### Atomized powder products

100 Industry Lane  
Princeton, KY 42445  
Phone +1 (270) 365-9551  
Fax +1 (270) 365-5910

### Shape Memory Alloys

4317 Middle Settlement Road  
New Hartford, NY 13413-5392  
Phone +1 (315) 798-2939  
Fax +1 (315) 798-6860

## United Kingdom

### Special Metals Wiggin Ltd.

Holmer Road  
Hereford HR4 9SL  
Phone +44 (0) 1432 382200  
Fax +44 (0) 1432 264030

### Special Metals Wire Products

Holmer Road  
Hereford HR4 9SL  
Phone +44 (0) 1432 382556  
Fax +44 (0) 1432 352984

## China

### Special Metals Pacific Pte. Ltd.

Room 1802, Plaza 66  
1266 West Nanjing Road  
Shanghai 200040  
Phone +86 21 3229 0011  
Fax +86 21 6288 1811

### Special Metals Pacific Pte. Ltd.

Room 910, Ke Lun Mansion  
12A Guanghua Road  
Chaoyang District  
Beijing 100020  
Phone +86 10 6581 8396  
Fax +86 10 6581 8381

## France

### Special Metals Services SA

17 Rue des Frères Lumière  
69680 Chassieu (Lyon)  
Phone +33 (0) 4 72 47 46 46  
Fax +33 (0) 4 72 47 46 59

## Germany

### Special Metals Deutschland Ltd.

Postfach 20 04 09  
40102 Düsseldorf  
Phone +49 (0) 211 38 63 40  
Fax +49 (0) 211 37 98 64

## Hong Kong

### Special Metals Pacific Pte. Ltd.

Unit A, 17th Floor, On Hing Bldg  
1 On Hing Terrace  
Central, Hong Kong  
Phone +852 2439 9336  
Fax +852 2530 4511

## India

### Special Metals Services Ltd.

No. 60, First Main Road, First Block  
Vasanth Vallabha Nagar  
Subramanyapura Post  
Bangalore 560 061  
Phone +91 (0) 80 2666 9159  
Fax +91 (0) 80 2666 8918

## Italy

### Special Metals Services SpA

Via Assunta 59  
20054 Nova Milanese (MI)  
Phone +390 362 4941  
Fax +390 362 494224

## The Netherlands

### Special Metals Service BV

Postbus 8681  
3009 AR Rotterdam  
Phone +31 (0) 10 451 44 55  
Fax +31 (0) 10 450 05 39

## Singapore

### Special Metals Pacific Pte. Ltd.

24 Raffles Place  
#27-04 Clifford Centre  
Singapore 048621  
Phone +65 6532 3823  
Fax +65 6532 3621

## Affiliated Companies

### Special Metals Welding Products

1401 Burriss Road  
Newton, NC 28658, U.S.A.  
Phone +1 (828) 465-0352  
+1 (800) 624-3411  
Fax +1 (828) 464-8993

Canada House  
Bidavon Industrial Estate  
Waterloo Road  
Bidford-On-Avon  
Warwickshire B50 4JN, U.K.  
Phone +44 (0) 1789 491780  
Fax +44 (0) 1789 491781

### Controlled Products Group

590 Seaman Street, Stoney Creek  
Ontario L8E 4H1, Canada  
Phone +1 (905) 643-6555  
Fax +1 (905) 643-6614

### A-1 Wire Tech, Inc.

A Special Metals Company  
4550 Kishwaukee Street  
Rockford, IL 61109, U.S.A.  
Phone +1 (815) 226-0477  
+1 (800) 426-6380  
Fax +1 (815) 226-0537

### Rescal SA

A Special Metals Company  
200 Rue de la Couronne des Prés  
78681 Epône Cédex, France  
Phone +33 (0) 1 30 90 04 00  
Fax +33 (0) 1 30 90 02 11

## DAIDO-SPECIAL METALS Ltd.

A Joint Venture Company  
Daido Shinagawa Building  
6-35, Kohnan 1-chome  
Minato-ku, Tokyo 108-0057, Japan  
Phone +81 (0) 3 5495 7237  
Fax +81 (0) 3 5495 1853

The data contained in this publication is for informational purposes only and may be revised at any time without prior notice. The data is believed to be accurate and reliable, but Special Metals makes no representation or warranty of any kind (express or implied) and assumes no liability with respect to the accuracy or completeness of the information contained herein. Although the data is believed to be representative of the product, the actual characteristics or performance of the product may vary from what is shown in this publication. Nothing contained in this publication should be construed as guaranteeing the product for a particular use or application.