



Elgiloy Specialty Metals – Strip Products

Alloy 20 Stainless Steel

UNS N08020
W. Nr 2.4660

Applicable Specifications

Strip and Foil ASTM A240, ASTM B463, NACE MR0175/ISO 15156, NACE MR0103

Description: Alloy 20 is a nickel-iron-chromium alloy with excellent corrosion resistance in acidic environments including phosphoric, sulfuric, and nitric acids. Alloying additions also provide resistance to stress corrosion cracking in chloride rich environments. Alloy 20 can be fabricated and welded through most conventional processes while maintaining resistance to pitting and crevice corrosion.

Applications include: Extraction columns, Heat exchangers, Mixing tanks, Pipes, Pumps, Valves, Food processing equipment, Springs

Industries supplied include: Chemical Processing, Food Processing, Oil & Gas

Nominal Composition

	C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Cb + Ta	Fe
min	-	-	-	-	-	32.00	19.00	2.00	3.00	8*C-1.0	Bal
max	0.07	2.00	0.045	0.035	1.00	38.00	21.00	3.00	4.00	-	-

Physical Properties

	At 70°F	At 20°C
Density	0.292 lb/in ³	8.08 g/cm ³
Modulus of Elasticity (E)	28.0 x 10 ³ ksi	193 GPa
Modulus of Rigidity (G)	11.0 x 10 ³ ksi	76 GPa
Coefficient of Expansion	8.2 μin/in-°F (70-212°F)	14.7 μm/m-°C (25-100°C)
Electrical Resistivity	53.5 μohm-in	135.9 μohm-cm
Thermal Conductivity	85 Btu-in/ft ² -hr-°F	12.3 W/m-°C

Typical Mechanical Properties

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1650-1830°F (900-1000°C)	80-110 ksi (550-760 MPa)	Up to 930°F (500°C)

Limitation of Liability and Disclaimer of Warranty:

- The content in these data sheets is provided primarily by third-party melting mills and is provided for reference only. It is not intended for engineering or design.
- Applications may be discussed, however, Elgiloy Specialty Metals, a Division of Combined Metals of Chicago L.L.C., does not recommend or endorse any material for any particular end use or application.
- The data included in this data sheet are typical values and may vary.
- Elgiloy Specialty Metals, a Division of Combined Metals of Chicago L.L.C., makes no representations or warranties, express or implied, as to the accuracy, completeness, condition, suitability, performance, fitness for a particular purpose, or merchantability of any information contained in any data sheet.
- In no event will Elgiloy Specialty Metals, a Division of Combined Metals of Chicago L.L.C., be liable for any damages whatsoever arising from the use of the information included in the data sheets.

For further information:
Email: stripinquiries@elgiloy.com
Phone: 1-888-843-2350

Elgiloy Specialty Metals - Strip Products
1565 Fleetwood Dr.
Elgin, IL 60123 USA

www.elgiloy.com

Rev Date: 8/26/2020