MARCEGAGLIA
FAGERSTA STAINLESS

DRAWN WIRE FOR HIGH TEMPERATURE

Thanks to a company history starting already 1873, Fagersta Stainless belongs to one of the world leading producers of stainless wire rod and wire. With customized chemistries the products fulfill everything from simple to high demanding applications.

STANDARD STEEL GRADES FOR HIGH TEMPERATURE

Our grades have tight chemistries and therefore equal properties from delivery to delivery.
We recommend following of our standard grades:

OPTIMUM DRAWN WIRE FOR HIGH TEMPERATURE

To get best possible properties for high temperatures, these parameters are important:

- Tight chemistry for identical properties
- Mechanical properties and deformation hardening
- Corrosion properties
- Surfaces
- Dimension tolerances

Grade family	Marcegaglia name	Fagersta	EN	ASTM		Application temperature (°C) max	Typical chemical composition, % by mass					
				TYPE	UNS		C	Cr	Ni	Mo	N	Others
F	409Ti/4512	R109.11	1.4512	409TI	-	730	0.025*	11.3	-	-	-	Ti
A	304H/4948	R320.17	1.4948	304H	S30200	800	0.07	18.35	8.10	-	0.04	-
A	4828	R323.10	1.4828	-	-	1000	0.045	19.3	11.7	-	0.03	1.95Si
A	4835	R327.21	1.4835	-	S30815	1150	0.075	21.00	10.2	-	0.165	REM
PH	Alloy 286/4980 VAR	R569.60	1.4980	A–286	S66286	700	0.05	14.6	24.7	1.2	-	0.15Al 2.10Ti 0.25V
A	310S/4845	R820.90	1.4845	310S	S31008	1150	0.045	24.50	19.50	-	-	-
A	314/4841	R823.13	1.4841	314	S31400	1150	0.02*	24.3	20.7	-	-	-
A	314/4841	R823.90	1.4841	314	S31400	1150	0.050	24.25	19.20	-	-	-
A	904L	840.21	20 25 5 C L/1.4539	904L	N08904	1000	0.015*	20	25	4.5	0.05	1.5Cu
A	330/4886	R860.13	1.4886	330	N08330	1150	0.03*	18.5	34.5	-	-	-
A	330Nb	R868.11	1.4864	330Cb	N08330	1150	0.025*	19.5	34.5	-	-	0.87Nb

Grade families: F = ferritic, A = austenitic, PH = precipitation hardening. *Max

MECHANICAL PROPERTIES AND DEFORMATION HARDENING

Depending on end-product's shape and required tensile strength, the wire rod should have specific ductility (formability) for the cold heading process and specific level of deformation hardening. Heat-resistant stainless steels are design to retain its shape and resist chemical degradation in extremely hot environments, often exceeding 550 °C. Austenitic stainless steels have resistance to carburizing and nitriding/low oxygen hot gas and higher creep strength.
The most important properties are:

- **Oxidation resistance (scaling resistance)**:

The single most important property. The steel forms a protective oxide layer (often with the help of chromium and silicon) that prevents oxygen from corroding the material.

- **Creep strength / hot strength**:

The ability to carry loads at high temperatures without softening or collapsing.

- **Resistance to corrosive gases**:

The ability to withstand aggressive atmospheres, such as sulfur-containing gases, during combustion or in industrial furnaces.

- **Dimensional stability**:

The material does not warp or change shape drastically under intense heating.

- **Mechanical strength at high temperatures**:

The material does not become brittle or crack when exposed to mechanical impacts while hot.

- **Resistance to thermal shock**:

The ability to withstand rapid temperature changes (e.g., when a furnace door is opened) without cracking.

APPLICATIONS

- Refractory anchors
- Conveyor belts
- Filters
- Baskets

SURFACES

- Cold drawn wire with dull or bright surface

DIMENSIONS

Standard:
1.50 – 16.00 (0.0592 inch - 0.630 inch)
(MOQ:s for some dimensions)
Tolerance:
according to h9 EN10278

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MM-SP_April 2026_EN