



625 / 2.4856

Alloy 625 is a low carbon (0.03%) nickel-chromium-molybdenum-niobium alloy which has excellent corrosion resistance to a wide range of corrosive media. Alloy 625 is normally supplied in annealed condition for wet corrosion applications and is TÜV-approved for pressure vessels in the temperature range from -196°C to 450°C. In annealed condition (grade 1) Alloy625 is characterized by:

- good mechanical property
- Resistance to chlorine-induced stress corrosion cracking
- high resistance to mineral acids such as nitric, phosphoric, sulfuric, and hydrochloric acid
- good resistance to alkalis and organic acids
- exceptional resistance to pitting, crevice, erosion and intergranular corrosion

Material Data Sheet

Material Designation	2.4856
Alloy	Alloy 625
EN Material Symbol	NiCr22Mo9Nb
UNS	N 06625
VdTUV Data Sheet	499

Main fields of application of alloy 625

2.4856 is used for:

- Natural gas pipelines
- Production systems and pipe coverings of riser pipes in oil production
- Preparation of phosphoric acid
- Shipbuilding and marine water lines
- Plants for the treatment of radioactive waste
- Flue gas scrubbers and dampers in flue gas cleaning systems

Chemical composition of alloy 625

C	Si	Mn	P	S	Cr	Mo
%	≤ %	≤ %	≤ %	≤ %	%	%
0.03	0.4	0.5	0.01	0.01	21.0-23.0	8.0-10.0

Mo	Ni	Al	Co	Fe	Ti	Nb+Ta
%	%	%	≤ %	≤ %	%	%
8.0-10.0	rest	0.4	1.0	0.4	0.4	3.2-3.8

Characteristics of alloy 625

Temperature Range	Wet corrosion and high-temperature variant possible
Density	8.44 g/cm ³
Melting Range	1290°C - 1350°C
ISO-V notch impact toughness (average at room temperature acc. to DIN EN 10045 part 1)	lengthwise ≥ 125 J/cm ² across ≥ 100 J/cm ²

Annealed Alloy 625 loses notched impact strength at room temperature after having been exposed to temperatures in the range from 538 °C to 593 °C.

Filler metal (for welding with alloy 625)

Welding rods and wire electrodes:

Nicrofer S 6020 - FM 625 (2.4831)
DIN EN ISO 18274: S Ni 6625 (NiCr22Mo9Nb)
UNS N06625
AWS: 5.14: ErNiCrMo3

Covered electrodes:

DIN EN ISO 14172: E Ni 6625 (NiCr22Mo9Nb)
(2.4621)
UNS W86112
AWS A5.11: ENiCrMo-3

Delivery program

Sheets / Plates mm

0.5 < 76.2

Bars / Billets dia. mm

5.0 - 450

Precision strip mm

0.1 - 0.3

With short delivery time:

plates or sheets, tubes, flanges, forged or die-cut rings and round blanks, elbows, T-fittings, reductions, screws, nuts or washers according to your request. According to your individual wishes, we are able to cut our material with our plasma- or water jet cutter. Our material is stocked in superformats of 2000x6000mm. Cut to size on request.

Material Outlet by Hempel

ECONOXX.com offers buyers a new and uncomplicated procurement channel, which also includes small quantities and materials in special alloys at favourable conditions.

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Services



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Weight Calculator