

Technical datasheet

Alloy 625LCF / 625HP / W-Nr. 2.4856

A highly formable nickel-based alloy that was developed as a fatigue resistant variant of alloy 625 for bellows applications.

Available products

Product form Sheet/plate	Size range from 0.5 mm thickness	Size range to 3.0 mm thickness
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Chemical composition (%)

Ni 58.0 min	Cr 20.0-30.0	Mo 8.0-10.0	Nb+Ta 3.1-4.5	Fe 5.0 max	Al 0.4 max	Si 0.15 max	N 0.02 max	C 0.03 max
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Major specifications

AMS 5879 BS 3072	UNS N06626 Meets the requirements of UNS N06625
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Physical properties

Density	8.44 g/cm ³
Melting range	1290-1350°C

Mechanical properties – typical room temperature properties (sheet)

Yield strength	450 MPa
Tensile strength	895 MPa
Elongation	52 %

Key attributes

A nickel-based alloy that was developed to have exceptional fatigue resistance for bellows applications. It is a modification of alloy 625 with tightly controlled composition and processing to achieve the required microstructure, fine grain size and yield strength. This grade has a grain size of ASTM 5 or finer for enhanced fatigue resistance which offers and improved fatigue life of up to 100 times that of conventional 625.

The alloy has excellent resistance to oxidation and corrosion in a wide range of conditions and is suitable for service at temperatures up to 650°C. It is highly formable and readily welded and finds application in aerospace and automotive industries where corrosion resistance, strength and fatigue resistance are required.

Alloy 625 has excellent forming and welding characteristics and can be readily formed by cold working. Please contact us for further details on forming, fabrication and welding consumables.

Applications

Flexible couplings
Expansion joints/compensator bellows
Automotive exhaust systems