ALLOY 825
UNS N08825

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DESCRIPTION

Alloy 825 is a nickel-iron-chromium alloy with additions of molybdenum, copper and titanium. This nickel steel alloy's chemical composition is designed to provide exceptional resistance to many corrosive environments. It is similar to Alloy 800, but has improved resistance to aqueous corrosion. It has excellent resistance to both reducing and oxidizing acids, to stress-corrosion cracking, and to localized attack such as pitting and crevice corrosion. Alloy 825 is especially resistant to sulfuric and phosphoric acids.

LIMITING CHEMICAL COMPOSITION (%)

C	CR	FE	NI	AL	TI	CU	MO
MAX 0.05	19.25-23.50	MAX 0.50	38.0-46.0	MAX 0.2	0.6-1.2	1.5-3.0	MAX 2.50-3.50

TYPICAL APPLICATIONS

- Chemical processing
- Pollution control
- Oil and gas well piping
- Nuclear fuel reprocessing
- Acid production

TENSILE REQUIREMENTS

TENSILE STRENGTH KSI (MIN.)	YIELD STRENGTH KSI (MIN.)
85	35

PRODUCT CAPABILITIES

J&J Alloys produces a wide selection of fittings, flanges, and custom components tailored to customer specifications and technical drawings. For custom inquiries or additional details, please contact your J&J Alloys sales representative.

PRODUCT	SIZE (NPS)	PRODUCT	SIZE (NPS)	PRODUCT	SIZE (NPS)
SW/THRD Couplings	1/8" - 8"	SW/THRD 90s	1/2" - 4"	BW Tees	1/2" - 10"
SW/THRD Half Couplings	1/8" - 8"	SW/THRD 90s (Block Pattern)	1/2" - 4"	BW LR/SR 90s (Block Pattern)	1/2" - 4"
THRD Plugs (Hex/Round/Square)	1/8" - 6"	SW/THRD Tees	1/2" - 4"	BW Cross (Block Pattern)	1/2" - 12"
THRD Hex Bushings	1/8" - 6"	SW/THRD Cross (Block Pattern)	1/2" - 4"	Pipe Nipples	1/4" - 8"
SW/THRD Inserts	1/8" - 4"	SW/THRD Caps	1/2" - 6"	Studding Outlets (Flat Bottom)	1/2" - 24"
BW/SW/THRD Unions	1/8" - 4"	BW Caps (Dome Shaped)	1/2" - 24"	ASME B16.5 (dims) Flanges	1/2" - 24"
Olets (TOL, SOL, WOL, EOL, LOL)	1/8" - 24"	MSS (Short) Stub Ends	1/2" - 60"	ASME B16.47 Flanges Series A&B	26" - 60"
Conc/Ecc Swages	1/2" - 8"	ASA (Long) Stub Ends	1/2" - 60"	Taper Bore BW 45s	1/2" - 30"
SW/THRD 45s	1/2" - 4"	BW Concentric Reducers	3/4" - 30"	Taper Bore BW 90s	1/2" - 30"
SW/THRD 45s (Block Pattern)	1/2" - 4"	BW Eccentric Reducers	3/4" - 24"	Taper Bore BW Tees	1/2" - 30"

NOTE: The information on this sheet have been compiled from a variety of sources, and should be considered as a general guide only. The information and data included are accurate to the best of our knowledge, and may be revised at any time without notice. J&J Alloys assumes no responsibility for the accuracy of this information.

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