



# NEWSLETTER

## ALLOY 825

**Wst. 2.4858  
UNS N08825**

**Stock range:** 6mm – 16mm OD  
1/8" – 1" OD

**Specification:** ASTM B 163/ ASTM B 423/ASTM B 829  
NACE MR0175/ISO 15156-3

**Maximum service temperature:** 550°C / 1020°F

Alloy 825 is an austenitic nickel-iron-chromium alloy with additions of copper, molybdenum and titanium. The alloy chemical composition is designed to provide exceptional corrosion resistance in both oxidizing and reducing environments. The nickel content is sufficient for resistance to chloride-ion stress corrosion cracking and the molybdenum also aids resistance to pitting and crevice corrosion. The addition of titanium stabilised the alloy 825 against sensitisation and inter granular corrosion. The resistance of alloy 825 to general and localised corrosion under diverse conditions gives the alloy broad usefulness.

### Characteristics

- Exceptional resistance to many corrosive environments
- Very good resistance to sulphuric and phosphoric acids
- Good mechanical properties from moderately to high temperatures
- Good formability and weld ability
- Good resistance to stress-corrosion cracking and pitting

### Market applications:

- Chemical process equipment
- Oil and Gas well tubing
- Chemical infection lines
- Acid production
- Down hole control lines

---

**Merinox Ltd**  
Unit H, 100 Shaw Road  
Oldham, Lancashire OL1 4AB United Kingdom

**Tel. +44 (0)161 - 627 3919**  
**Fax. +44 (0)161 - 627 1901**

**Your Tubing Specialist**

**E-mail: [sales@merinox.co.uk](mailto:sales@merinox.co.uk)**

**[www.merinox.co.uk](http://www.merinox.co.uk)**

## Technical details

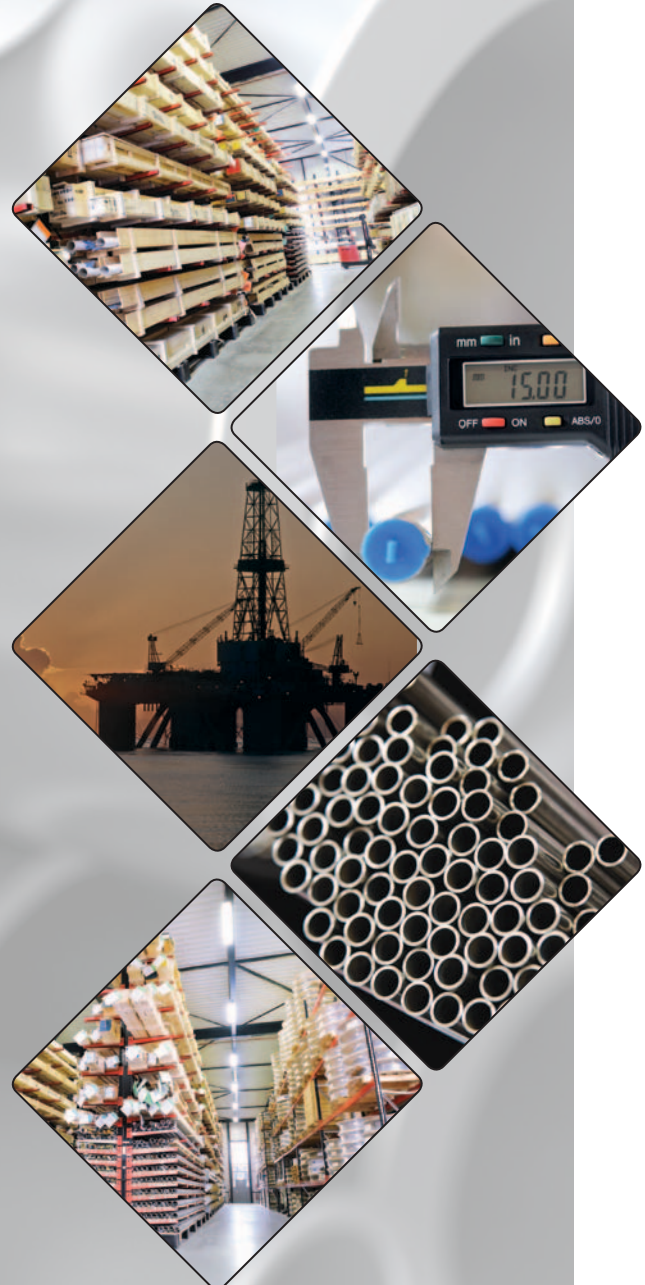
Technical composition													
(%)		Fe	Cr	Ni	Mo	Mn	Cu	Si	P	C	S	Ti	Al
825	min	22.0	19.5	38.0	2.5	-	1.5	-	-	-	-	0.60	-
	max	-	23.5	46.0	3.5	1.00	3.0	0.50	0.030	0.05	0.030	1.20	0.20

<b>Mechanical properties</b>	<b>825</b>
<b>Tensile strength (mpa, min)</b>	<b>590</b>
<b>Yield strength (0.2% offset mpa, min)</b>	<b>240</b>
<b>Elongation (% , min)</b>	<b>30</b>
<b>Density / weight (g / cm3 / kg)</b>	<b>8.14</b>

## Dimensions available from stock

METRIC
6MM X 1MM
6MM X 1.5MM
8MM X 1MM
10MM X 1MM
10MM X 1.5MM
12MM X 1MM
12MM X 1.5MM
16MM X 2MM

IMPERIAL
1/8" x 0.028"
1/4" x 0.036"
1/4" x 0.048"
1/4" x 0.065"
3/8" x 0.036"
3/8" x 0.049"
3/8" x 0.065"
3/8" x 0.083"
1/2" x 0.036"
1/2" x 0.049"
1/2" x 0.065"
1/2" x 0.083"
5/8" x 0.065"
3/4" x 0.048"
3/4" x 0.065"
3/4" x 0.083"
3/4" x 0.095"
3/4" x 0.104"
1" x 0.065"
1" x 0.083"
1" x 0.095"
1" x 0.104"



**Merinox Ltd**  
**Unit H, 100 Shaw Road**  
**Oldham, Lancashire OL1 4AB United Kingdom**

**Tel. +44 (0)161 - 627 3919**  
**Fax. +44 (0)161 - 627 1901**

**Your Tubing Specialist**

**E-mail: [sales@merinox.co.uk](mailto:sales@merinox.co.uk)**

**[www.merinox.co.uk](http://www.merinox.co.uk)**