

## SA Alloy 825

**CATEGORY** SAW Arc Submerged

**TYPE** Nickel - Chromium - Molybdenum - Copper alloy for SAW welding.

**APPLICATIONS** The excellent corrosion-resistant properties of Alloy 825 make the alloy a suitable choice for a variety of difficult applications. Uses include fabricated equipment found in chemical and petro- chemical processing, pulp and paper manufacturing, flue gas desulphurization systems and metal pickling operations.

**PROPERTIES** Fully austenitic weld metal with high resistance against stress corrosion cracking and pitting in media containing chloride ions. Good corrosion resistance against reducing acids due to the combination of Ni, Mo and Cu. Sufficient resistance against oxidizing acids. The weld metal is corrosion resistant in sea water. SA Alloy 825 is best to be used with [FL 839 flux](#).

**CLASSIFICATION**

AWS	A 5.14: ER NiFeCr-1 UNS N08065
EN ISO	18274: S Ni8065 (NiFe30Cr21Mo3)
DIN: W.Nr.	2.4858

**SUITABLE FOR** G-X7NiCrMoCuNb 25 20, X1NiCrMoCuN25 20 6, X1NiCrMoCuN25 20 5, NiCr21Mo, X1NiCrMoCu 31 27 4, N08926, N08904, ALLOY 825, N08028, UNS N08825 W.Nr: 1.4500, 1.4529, 1.4539 (904L), 2.4858, 1.4563, 1.4465, 1.4577 (310Mo), 1.4133, 1.4500, 1.4503, 1.4505, 1.4506, 1.4531, 1.4536, 1.4585, 1.4586

**APPROVALS** CE approved

**WELDING POSITIONS:**



**ALL-WELD METAL ANALYSES % (TYPICAL)**

C	Mn	Si	Cr	Ni	Mo	Cu	Ti	Fe
<0.05	<0.1	<0.4	19.5-23.5	38-46	2.5-3.5	1.5-2.8	0.6-1.2	>22

**MECHANICAL PROPERTIES (TYPICAL)**

Flux type as welded	R <sub>p0,2</sub> MPa	R <sub>m</sub> MPa	A <sub>5</sub> (%)	Impact Energy (J) ISO-V			Hardness HRc / HV
				20°C	-40°C	-196°C	
FL 839	425	630	30			70	

**WELDING PARAMETERS / PACKING**

Welding Parameters			
D (mm)	Voltage (V)	Current (A)	Travel speed (cm/min)
1,6	26-29	225-325	35-60
2,4	29-33	300-400	35-60
3,2	29-33	350-500	35-60

**REDRYING TEMPERATURE** not required