

Alloy 825

CATEGORY SMAW Stick Electrodes

TYPE Solid Nickel based welding wire for gas shielded arc 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 Excellent weldability with 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.

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:



WELD METAL ANALYSIS ACC. AWS %

Ni	C	Mn	Fe	Si	Cu	Cr	Mo	Al	Ti
38-46	< 0.05	<1.0	>22	< 0.4	1.5-2.8	19.5-23.5	2.5-3.5	<0.2	0.6-1.2

MECHANICAL PROPERTIES

Heat Treatment	R _{p0,2} (N/mm ²)	R _m (N/mm ²)	A ₅ (%)	Impact Energy (J) ISO-V			Hardness HRc / HV
				-20°C	-40°C	-196°C	
AW	425	630	30			70	

AW: as welded

WELDING PARAMETERS / PACKING

Welding Parameters			Packing		
D (mm)	Voltage (V)	Current (A)	spool type	kg / spool	kg / pallet
0.8	24-28	140-180	D-200 / S-300	5 / 15	1000 / 1080
1.0	27-30	160-200	D-200 / S-300	5 / 15	1000 / 1080
1.2	28-32	180-230	D-200 / S-300	5 / 15	1000 / 1080

REDRYING TEMPERATURE not required

GAS ACC. EN ISO 14175: I1, I3 (Ar-He)