SUPRANEL 625

OERLIKON

MMA Electrodes
Nickel and Copper alloys

SUPRANEL 625 is a basic coated MMA electrode for welding highly corrosion-resistant Cr-Mo-Nickel base alloys, such as 625, 825 and similar alloys. Also suitable for molybdenum alloyed corrosion-resistant steels, e.g. 7%Mo, such as X1NiCrMoCuN25-20-7 and cryogenic toughness nickel steels. Very resistant to stress corrosion cracking and pitting corrosion. Cryogenic toughness down to -196°C. In sulphur-free atmospheres, non-scaling <1200°C and in sulphurous atmospheres the weld metal can be used for operating temperatures <500°C. Even at higher temperatures there is only limited carbon diffusion in the weld metal thus avoiding crack-prone carbides at the weld interface of dissimilar joints. The coefficient of thermal expansion is between austenitic and ferritic steels, therefore SUPRANEL 625 is also suited for joining ferritic to austenitic steels, dissimilar joints, at operating temperatures or postweld heat treatment >300°C.G10:G13molybdenum alloyed corrosion-resistant steels, e.g. 7%Mo, such as X1NiCrMoCuN25-20-7 and cryogenic toughness nickel steels.
SUPRANEL 625 is used for welding of furnace equipment, petrochemical and power generation plants. Some other applications include: Overmatching corrosion-resistant welds in alloy 825, Hastelloys G and G3, alloy 28, 904L, 6%Mo super-austenitic stainless 254SMo, and also overlays on pumps, valves and shafts, often in offshore and marine environments where high pitting resistance (PRE = 50) and tolerance to weld metal dilution are essential.
SUPRANEL 625 has an excellent weldability in all position. Smooth and stable arc with good slag removal.

Electrode for welding Ni alloy 625 and 825 type steels. Used for dissimilar steels with operating temperatures down to –196°C. Note: all diameters in all lengths are supplied in VACUUM PACKING.

Classification	
EN ISO	14172: E Ni 6625
AWS	A5.11: E NiCrMo-3

Approvals	Grade
DNV	X

CE

Chemical analysis (Typical values in %)

C	Mn	Si	Cr	Ni	Mo	Nb	Fe	Al
0.02	0.9	0.2	22	Rem	9	3.7	≤ 1.5	≤ 0.4

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				+20 °C	-196 °C
As Welded	≥ 420	≥ 760	≥ 30	≥ 60	≥ 50

Materials

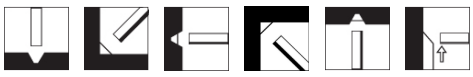
1.4539 (X2NiCrMoCu 25-20); X2CrNiMoCuN20-18-6; 1.4529 (X1NiCrMoCuN 25-20-6)

2.4856 (Alloy 625, NiCr22Mo9Nb); 2.4858 (Aliaj 825, NiCr21Mo)

UNS N06625; UNS N08825

Storage
Keep dry and avoid condensation.
Re-drying not generally required.
Re-dry at 300-350°C for 1 hour, 5 times max.

Current condition and welding position
DC+



PA PB PC PD PE PF

Packaging data

Diam. (mm)	Length (mm)	Current (A)	Approx. weightn(kg/1000)	VPMD	
				PC	Code
2.5	300	50-70	17.1	110	W000258497
3.2	350	70-95	34.4	65	W000258498
4.0	350	90-120	50.0	45	W000258499
5.0	350	130-170	77.1	30	W000258500