

SUPRANEL 182 is a basic-coated MMA electrode for welding high-temperature creep-resistant, heat resistant and corrosion resistant Ni-Cr alloys. Cryogenic toughness down to  $-196^{\circ}\text{C}$ , creep resistant  $<800^{\circ}\text{C}$ , non-scaling  $<1000^{\circ}\text{C}$ . In a sulphurous atmosphere the weld metal can be used up to  $500^{\circ}\text{C}$ . 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 weld metal coefficient of thermal expansion is between austenitic and ferritic steels, therefore SUPRANEL 182 is used for joining ferritic to austenitic steels, dissimilar joints, with operating temperatures or postweld heat treatment  $>300^{\circ}\text{C}$ .

SUPRANEL 182 applications include heat-resisting nickel-base alloys to themselves for use in furnace equipment up to about  $900^{\circ}\text{C}$ . Other applications include: Mixed welds between most nickel-base alloys, including Monel 400 and stainless, low alloy or CMn steels without need to preheat.

SUPRANEL 182 has an excellent weldability. Smooth and stable arc with good slag removal.

### Classification

EN ISO	14172: E Ni 6182
AWS	A5.11: E NiCrFe-3

### Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Nb	Cu	Fe	Ti
$\leq 0.1$	5.0-9.5	$\leq 1.0$	$\leq 0.020$	$\leq 0.020$	13.0-17.0	$> 59.0$	1.0-2.5	$\leq 0.050$	$\leq 10.0$	$\leq 1.0$

### All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)
				$-196^{\circ}\text{C}$
As Welded	$\geq 380$	$\geq 550$	$\geq 30$	$\geq 47$

### Materials

2.4816; 1.4876; 1.4958

UNS N06600

### Storage

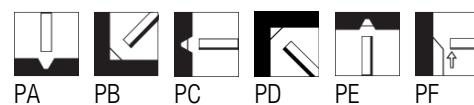
Keep dry and avoid condensation.

Re-drying not generally required.

Re-dry at  $300^{\circ}\text{C}$ - $350^{\circ}\text{C}$  for 1 hour, 5 times max.

### Current condition and welding position

DC+



### Packaging data

Diam. (mm)	Length (mm)	Current (A)	Approx. weightn(kg/1000)	VPMD	
				PC	Code
2.5	300	50-70	18.5	100	W000380270
3.2	350	75-95	36.0	60	W000380271
4.0	350	100-130	53.5	45	W000380272
5.0	350	140-170	75.0	30	W000380273