



UP 347

S.S. Submerged Arc Wire

Classification

AWS A5.9 : ER 347
EN ISO 12072 : S 19 9 Nb

Material N^o : 1.4551

Description & Applications

UP 347 is solid wire electrode for submerged arc welding -18%Cr - 8% Ni type stainless steel Niobium / columbium stabilised-suaited to weld Ti or Nb stabilised stainless steels. The weld metal contains about 8% delta ferrite.

The weld deposit is to resistant to intercrystalline corrosion for service temperature up to 400°C.

Base materials: Stainless steels for geneal use.

| UNS | Alloy | EN 10088 | Material N ^o | UGINE |
|--------|-------|----------------|-------------------------|-----------------------|
| S30400 | 304 | X5CrNi18-10 | 1.4301 | UGINOX 18-9 B , D , E |
| S30403 | 304L | X2CrNi 19-11 | 1.4305 | UGINOX 18-10 L |
| S32100 | 321 | X5CrNiTi 18-10 | 1.4541 | UGINOX 18-10T |
| S34700 | 347 | X5CrNiNb 18-10 | 1.4550 | |

Typical Chemical Composition Wire Electrode (%)

| C | Si | Mn | Cr | Ni | Mo | Cu | Nb | P | S |
|---------------|----------------|---------------|----------------|---------------|------|------|---------|-------|-------|
| 0.04– 0.06 | 0.30 - 0.65 | 1.30 – 2.0 | 19.0 – 21.0 | 9.0 – 10.5 | <0.5 | <0.5 | 0.4-0.6 | <0.03 | <0.02 |

Typical Chemical Composition Weld deposit(%)

| C | Si | Mn | Cr | Ni | Mo | Cu | Nb | P | S |
|---------------|-------|----------|----------------|---------------|------|------|---------|-------|-------|
| 0.04– 0.05 | < 1.0 | 0.8 -1.5 | 18.5 - 20.5 | 9.0 – 10.5 | <0.5 | <0.5 | >10 x C | <0.03 | <0.02 |

All Weld Metal Mechanical Properties (combination with UP 308L / UP WP380)

| Conditions | UTS Rm (MPa) | YS Re (MPa) | % Elg A ₅ | Impact (KV) | |
|------------|-----------------|----------------|-------------------------|----------------------|------------|
| | | | | Temp. ^o C | J |
| AW | >580 | >390 | >30 | 20°C -196°C | >80 >40 |

Welding Current & Instructions

| Process | Ø (mm) | Welding Parameters | | | Flux |
|----------------|-------------|--------------------|---------------|--------------|----------|
| | | Current (A) | Voltage (V) | Speed cm/min | |
| UP / SAW =+ | 2.4 | 300 – 350 | 26 – 28 | 45 – 55 | UP-WP380 |
| | 2.8 | 350 – 420 | 26 – 28 | 45 - 55 | |
| | 3.2 | 450 – 500 | 26 – 28 | 45 – 55 | |