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# Product Data Sheet

## STAVINOX MIG 625

MIG WELDING WIRE Nickel and Nickel Alloy

**Classification:**

**AWS A 5.14 : ERNiCrMo-3**
**UNS : N06625**

**Description:** STAVINOX MIG Inconel 625 is an nickel-chromium alloy (UNS N06625 /W.Nr.2.4856) is used for its excellent formability ,better weldability than other highly alloyed nickel base wire and for it's outstanding strength & toughness at temperatures ranging from cryogenic to elevated temperatures in the range of 2 000° F (1093 °C). Addition of molybdenum and columbium contributes to the alloy's outstanding corrosion resistance and it resists a wide range of severely corrosive environments and is especially resistant to pitting and crevice corrosion. STAVINOX MIG INCONEL 625 wire is resistant to inter granular corrosion even in the welded condition and can be welded by both manual and automatic welding methods, including gas tungsten arc (GTAW), gas metal arc (GMAW), electron beam, and resistance welding .STAVINOX MIG Inconel 625 has also exceptional fatigue resistance and excellent resistance to oxidation and corrosion over a broad range of corrosive conditions, including aerospace (Aircraft ducting systems ,Jet engine exhaust systems, turbine shroud rings, bellows and expansion joints , aircraft exhaust liners and turbine seals) ,Nuclear water reaction components, power plants , sea water, marine engineering, pollution-control equipment and chemical processing industry applications.

**Materials to be welded**
Suitable for welding Nickel base alloys such as Inconel 625 and Incoloy 825 and for dissimilar welds between stainless or Nickel base alloys and mild steel .

**Typical Chemical Composition (%)**

| C | Mn | Si | Cr | Ni | Mo | Cu | S | P | Ti | Nb+Ta | Al | Fe |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.10 max. | 0.50 Max | 0.50 Max | 20.00-23.00 | 58.00 Min | 8.00-10.00. | 0.50 max. | 0.015 max. | 0.020 max. | 0.40 max. | 3.15-4.15 | 0.40 max. | 5.0 max. |

**Typical All Weld Mechanical Properties**

| Yield Strength N/mm$^2$ | Tensile Strength N/mm$^2$ | Elongation A5 (%) | Impact Energy ISO – V (J) 20° C |
|---|---|---|---|
| ≥350 | ≥750 | ≥25% | ≥100 |

The chemistry and all weld mechanical properties will vary with the type of shielding gas used. Recommended shielding gas is 75% Ar + 25% He .

**Welding Directions :-** MIG welding can be performed as short, spray or pulsed arc. Short arc is preferably used for thin gauges, both for horizontal and positional welding. Spray arc increases the deposition rate. Welding with pulsed arc gives excellent possibilities for a good result in varying plate thicknesses in all positions. The highest flexibility using pulsed arc is achieved with 1.20 mm

**Current Conditions:-** DC (+)

**Storage: -** Keep dry and avoid condensation.

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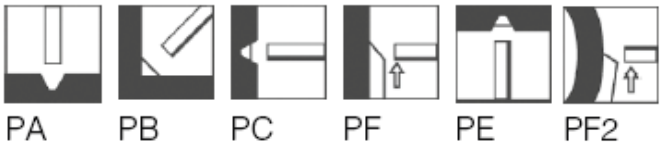
**Welding position:-**




**Recommended Welding Data:-**

| Diameter (mm) / Operating range | | 0.90 | 1.20 | 1.60 |
|---|---|---|---|---|
| 75%Ar+25%He | Amp | 150~190 | 180~220 | 200~250 |
| | Volt | 26~29 | 28~32 | 29~33 |

**Packing Data:**

| **Size (mm )** | 0.60 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 | 1.60 |
|---|---|---|---|---|---|---|---|
| **Weight (kg)** | 12.50/15.00 | 12.50/15.00 | 12.50/15.00 | 12.50/15.00 | 12.50/15.00 | 12.50/15.00 | 12.50/15.00 |

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