

Gemini® BBB

Shielded Metal Arc Welding (SMAW – Stick)

For most grades of stainless steel including molybdenum bearing types such as 316, 318, 303, 315 and 329.

Features

- Down Hand Welding
- 80,000 psi Strength
- Excellent Ductility
- Ideal For Poor Fit Up
- Ultra Low Carbon
- Easy To Use, All Positions
- Easy Slag Removal
- Minimum Distortion
- Low Amperage
- High Elongation

Characteristics

Gemini BBB is a uniquely designed stainless steel electrode for vertical down welding. It also can be used for all positions. A very controlled puddle for poor fit up joints or filling holes. Especially suited for thin to medium gauge, molybdenum bearing stainless steels. Makes pipe welding much easier in all situations.

Gemini BBB is a perfect alloy for chemical, food and refinery applications where vertical stainless welds are required.

Technical

Size and Amps AC/DC $\pm 30\%$

Inches	3/32	1/8
(mm)	(2.4)	(3.2)
Amps	80	100

With DC use reverse polarity. (DCEP)

Application

- For vertical set amperage at high end of range.
- Electrode may show red color which is normal.
- Clean base metal.
- Run vertical down, close arc with sharp upward angle.

Gemini® A

Shielded Metal Arc Welding (SMAW – Stick)

For stainless steels 301, 302, 302B, 303, 304, 304L, 305, 308L, 321, 347, and all AISI 200 & Ferrite 400 types.

Features

- High Strength 85,000 psi
- Superior Out-of-Position Weldability
- Excellent Corrosion Resistance
- Easy To Use
- Extra Low Carbon Content
- Ultra Low Splatter

Characteristics

Gemini A produces sound welds with excellent corrosion resistance. Ideal for use in chemical, refining, brewing, dairy and food applications. The extra low carbon in **Gemini A** avoids troublesome carbide precipitation and resultant weld decay. When conditions of heat and corrosion are severe **Gemini A** provides the ultimate protection.

In addition, **Gemini A** has excellent impact resistance, producing ideal cushion layers prior to hardfacing.

Technical

Size and Amps AC/DC ±30%

Inches	3/32	1/8
(mm)	(2.4)	(3.2)
Amps	55	85

With DC use reverse polarity. (DCEP)

Application

- Apply with a close arc or drag.
- Skip weld and avoid overheating the work.
- Fit parts accurately and tack to maintain alignment.
- Clean slag between passes.
- For vertical run up and weave.

Gemini® C

Shielded Metal Arc Welding (SMAW – Stick)

For nickel & steel alloys, overlay and joining, ideal for Inconel or Hastelloy.

Features

- 121,000 psi Strength
- Outstanding Corrosion Resistance To 2000°F (1093°C)
- Resists Acid, Salts and Chlorine Compounds.
- Contains Tungsten
- Resists Deformation and Wear At Elevated Temperatures
- 47% Elongation
- For Joining and Overlaying
- Work Hardens With Use
- 25 RC As Welded, 40 to 45 RC Work Hardened
- Excellent For Hot Metal Implements
- Machine With Carbide Tools

Characteristics

Gemini C has unsurpassed corrosion resistance to vapors and solutions of sulphuric and hydrochloride acids, as well as chlorine gas and hypochlorite's. Deposits resist oxidizing and non-oxidizing salts, alkalis and organic acids. They have high resistance to pitting in sea water and marine atmosphere. **Gemini C** has been developed to produce unsurpassed durable deposits to resist wear and corrosion even at elevated temperatures and with heavy impact loads. Deposits retain hardness to 1000°F (538°C) and resist oxidation and corrosion up to 2000°F (1093°C).

Gemini C is excellent for joining and overlaying high alloy material, such as Inconel and Hastelloy or stainless steels. In addition, it can be used to provide a corrosion resistant overlay on mild or low alloy steels. It is ideal for hot forging dies, ladles, tong bits, forming rolls, draw punches and any parts exposed to extreme thermal shock, heavy corrosion at elevated temperatures. Contains tungsten, chromium and molybdenum (nickel base).

Technical

Size and Amps AC/DC ±20%

Inches	3/32	1/8	3/16
(mm)	(2.4)	(3.2)	(4.8)
Amps	80	100	160

With DC use reverse polarity. (DCEP)

Application

- Remove all damaged metal.
- Use short arc and stringer beads.
- For optimum results, limit thickness to two passes and preheat heavy or critical parts to 600°F (315°C).
- Fill all craters.
- Not heat treatable.

Gemini® E

Shielded Metal Arc Welding (SMAW – Stick)

For stainless steels, high nickel and chromium and unknown types.

Features

- Outstanding Oxidation Sealing and Heat Resistance
- Welds 25/20 Type Stainless
- Perfect For Unknown Analysis
- Spatter Free Deposits
- High Ductility (33% Elongation)
- High Strength 85,000psi
- Good Strength To 2000°F (1093°C)
- Welds Steel To Stainless

Characteristics

Gemini E is perfect for welding stainless steels of 25/20 type and for use when the exact composition of the stainless is not known. This product contains more chromium and nickel than any type of stainless filler metal. As a result, deposits have unusually high resistance to oxidation and scaling at elevated temperatures. Ideal for 309, 310 and 314 types. As well as Martensitic 400 series.

Typical applications for **Gemini E** are tanks, heat exchanges, furnace parts, heat treating, baskets, valves and repair work that calls for stainless to be welded to any type of carbon steel. Deposits are spatter free and provide extraordinarily high ductility.

Technical

Size and Amps AC/DC ±30%

Inches	3/32	1/8
(mm)	(2.4)	(3.2)
Amps	60	90

With DC use reverse polarity. (DCEP)

Application

- **Gemini E** is applied with a short arc and stringer beads.
- Avoid weaving.
- Weld intermittently to prevent overheating.
- Bevel sections over 1/8 thick.
- Fit parts accurately and tack to maintain alignment.

Gemini® I

Shielded Metal Arc Welding (SMAW – Stick)

For joining or cladding. Nickel alloys, stainless steels, carbon steels, Inconel, and dissimilar combinations.

Features

- 137,000 psi Tensile
- Outstanding 49% Elongation
- Excellent on High Corrosion Applications where Cracking is a Problem.
- Resistant to Phosphoric, Sulfuric, Nitric and Hydrochloric Attack.
- Resists Crevice Corrosion and Pitting.
- Tough, Durable Welds in Low or High Temperature Applications.

Characteristics

Gemini I is excellent for joining and cladding steels to resist high heat and corrosion. It will also resist crevice corrosion and pitting. Suitable for welding Inconel's as well as dissimilar steel combinations.

Gemini I is a high strength nickel / chromium / molybdenum superalloy with excellent resistance to pitting, crevice and corrosion cracking at a wide range of temperatures. Oxidation problems are greatly reduced with **Gemini I**. It is an easy running material, even out of position. Recommended for high stress, crack sensitive applications at extremely low or highly elevated temperatures up to 2000°F.

Gemini I is typically used in seawater applications (where stress cracking is common), in highly acidic or oxidizing environments in the oil and gas and chemical industries, and on equipment subject to extreme heat in turbine ducting or furnace applications.

Technical

AC/DC

Inches	3/32	1/8
(mm)	(2.4)	(3.2)
Amps	60	90

With DC use reverse polarity. (DCEP)

Application

- Remove damaged metal.
- Surface must be clean.
- Use short arc.
- Warm cold metal to room temperature.