

Stainless Steel (Filler Rods & Wires)

SM 2209



 **SENOR[®]**
One Stop Solution for Welding & Brazing Consumables

SM 2209

Filler Rods & Wires

Stainless Steel

Classifications:

AWS / SFA-5.9 : ER 2209
 UNS No. : S39209
 BS 2901-PT2 : 22.8.3S92

Characteristics:

SM 2209 rod/wire is used to weld duplex stainless steels such as UNS S31803 (Type 2205). The weld deposit is characterized by high tensile strength, resistance to stress corrosion cracking and improved resistance to pitting, in corrosive environments with high acids and chlorides concentration. The chemical composition results in a lower ferrite content than the base metal for improved weld ability



Technical Data:

UTS : 69-86 kgf/mm²
 0.2% proof stress : 56-64 kgf/mm²
 Elongation (L=4D) : 20-30 %

Applications:

- 1) pipe and fabrication work in offshore, gas and chemical industries
- 2) petrochemical process industries, e.g. pipework systems, flow-lines, risers, manifolds etc.
- 3) Suitable for standard duplex stainless steels UNS S3183 (wrought) J92205 (cast), ASTM F51, DIN, 1.4462, BS, 1501 318S13

Weld Metal Chemistry (wt%):

C	P	Cu	Mn	Cr	N	Si	Ni	S	Mo
0.03	0.03	0.75	0.5-2.0	21.5-23.5	0.08-0.20	0.90	7.5-9.5	0.03	2.5-3.5

Current Conditions: AC, DC (+):

Process	Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
MIG	0.3 1.2 1.6	26-29 28-32 29-33	160-210 180-250 200-280	30-50 FCH (cubic feet per hour)	Argon + 2-5% CO2
TIG	1.6 2.4 3.2				

Availability:

Standard Size : 1.6, 2.0, 2.5, 3.2 & 4.0 mm dia in 500/1000 mm length
 Packing : 500 mm in 5 Kg & 1000 mm in 10 Kg for TIG Welding
 Spools : 0.8, 1.0, 1.2 & 1.6 mm dia in 12.5 Kg spool for MIG Welding.

Note On Usage:

- 1) Excessive exposure of electrodes to humid conditions will cause some moisture pick-up and increase the risk of porosity.
- 2) For electrodes that have been exposed: Redry 200 – 300°C/1-2h to restore to as-packed condition.
- 3) Welding of pipes require use of purge gas in order to ensure a stainless root face of the weld.
- 4) Inter-pass temperature should not exceed 150°C, and heat input should not exceed 1.5kJ/mm.

Above are basic guidelines and will vary depending on joint design, number of passes and other factors.

!WARNING

Protect yourself and others. Read and understand this warning. Do not remove this warning.

Fumes and Gases can be hazardous to your health

- Before use, read and understand the Material Safety Data Sheet (MSDS), the manufacturer's instructions, and your employer's safety practices.
- If MSDS is not enclosed. Obtain from your employer.
- Keep your head out of the fumes. See Section 5 of the MSDS for specific fume concentration limits.
- Use enough Ventilation, exhaust at the arc, or both, to keep fumes and gases from your breathing zone and the general area. If needed, use a proper respirator.
- No hazards exist before this product is used in arc welding.

Electric Shock can kill

- Always wear dry insulating gloves
- Insulate yourself from work and ground.
- Do not touch live electrical parts.

ARC Rays can injure eyes and burn skin

- Wear welding helmet with correct filter.
- Wear correct eye, ear, and body protection.

Welding can cause fire or explosion

- Do not weld near flammable material.
- Watch for fire, keep, extinguisher nearby.

Read American National Standards Z49.1, "Safety In Welding, Cutting and Allied Process." from American Welding Society.