

For Mild Steel and 490MPa High Tensile Strength Steel

APPLICATIONS

Welding of mild steel and 490MPa high tensile strength steel for machinery, structures, steel frames, ships, bridges, towers, chemical engineering apparatus, rolling stock and cans.

CHARACTERISTICS

SF-1 is a rutile type seamless flux cored arc welding wire to be used with CO₂ shield gas. Arc is stable, spatters are few and bead is smooth with good shape and appearance since easily removable slag covers bead evenly. The diffusible hydrogen content is as low as that of solid wires since the wire has no seam and, consequently, weld metal shows excellent crack resistance. Welding fume is also less. It assures high welding efficiency since deposition rate is high and all-position welding is easily performed with almost the same current.

GUIDELINES FOR USAGE

1. Any welding machine for solid wire can be used as it is, but wire feed roller's pressure should be adjusted a little looser.
2. A suitable shield gas flow rate is 20~25 ℓ/min.
3. Distance between base metal and tip should be kept within 20~30mm.
4. Arc voltage should be 1 or 2 volt lower than that for conventional flux cored wires and 4 or 5 volt lower than that for solid wires.
5. SB-41, backing material, is recommended for one side welding.

WELDING POSITION



■ TYPICAL CHEMICAL COMPOSITION OF WELD METAL (%)

Shield Gas	C	Si	Mn	P	S
CO ₂	0.06	0.50	1.40	0.015	0.010

■ TYPICAL MECHANICAL PROPERTIES OF WELD METAL

Yield Strength, MPa	Tensile Strength, MPa	Elongation, %	Charpy 2V-notch at 0°C, J
520	580	28	91

■ SIZES & RECOMMENDED CURRENT RANGE<DC (+)>

Diameter (mm)		1.0	1.2	1.4	1.6
Current A	F	150~260	180~320	200~410	220~450
	H-Fil	150~260	180~320	200~410	220~450
	H	150~240	180~300	200~350	220~400
	V-up	150~200	180~260	180~260	200~280
	V-down	160~220	200~280	220~300	—
	OH	150~240	180~260	180~260	—