Solid Wire Electrode for Submerged Arc Welding

BA-S3Si

Classification: EN ISO 14171-A (EN 756) – **S3Si**
SFA 5.17 / AWS A5.17 – **EH12K**

Typical analysis and chemical composition acc. to EN ISO 14171-A and AWS A5.17: (Weight Percent)

Wire electrode	C	Si	Mn	Mo	Ni	Cr	P	S	Cu total
Typical analysis BA-S3Si	0.09	0.33	1.57	0.06	0.04	0.03	0.012	0.009	0.06
S3Si acc. to ISO 14171-A	0.07–0.15	0.15–0.40	1.30–1.85	0.15	0.15	0.15	0.025	0.025	0.30
EH12K acc. to AWS A5.17	0.06–0.15	0.25–0.65	1.50–2.00				0.025	0.025	0.35

Characteristics:
Wire electrode with higher Si-content for submerged arc welding of non-alloy and fine grain steels (especially Off-Shore), higher strength shipbuilding steels, pipe steels, boiler and vessel steels.

Base Materials:
- Non-alloy structural steels acc. to EN 10025 and ASTM: S235JRG2/A570 grade 36 to S355J2G3R/A572 grade 50
  Suitable fluxes: BF 3 and BF 5.1
- Fine grain steels acc. to EN 10025, EN 10028 and ASTM: P355N/S355NL/A516 grade 70 / 633 grade E and P460N/S460NL
  Suitable fluxes: BF 3, BF 5.1, BF 6.5 and BF 10
- Off-shore structural steels up to 460 MPa yield strength and BS 4360-grade 50 D
  Suitable fluxes: BF 5.1 and BF 10
- Shipbuilding steels: higher strength
  Suitable fluxes: BF 5.1 and BF 10
- Pipe steels acc. to ISO 3183, EN 10208 and API-5: L360N/X52 to L485Q/X70
  Suitable fluxes: BF 5.1, BF 6.30 and BF 6.5
- Boiler and vessel steels acc. to EN 10028 and ASTM: P235GH/A516 grade 55, P355GH/A516 grade 70 and S275J2G3/A572 grade 42, S355J2G3/A572 grade 50
  Suitable fluxes: BF 3, BF 5.1, BF 6.5 and BF 10

Flux type suitability is strongly dependent on its application. In combination with the wire electrode the most suitable flux should match the requirements of the plate material as closely as possible under the existing welding conditions. Further information can be obtained from the technical flux data sheets.

Package forms:
Coils, spools, drums and spiders as standard package forms for SAW-wire electrodes, different package forms on request.

Diameter:
2.0 – 5.0 mm; Sizes and tolerances acc. to ISO 544 and AWS A5.17.

Wire electrode surface:
Copper-coated, smooth finish free from surface defects and foreign matter.