

| Classification | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------|--------------------------------------------------|---------------------------|--------|--------|
| SAW solid wire | | | | | | |
| ISO 14171-A | | | AWS A5.17 | | | |
| S2Si | | | EM12K | | | |
| Characteristics and typical fields of application | | | | | | |
| <p>This wire is for submerged arc welding applications. Excellent for wide range of applications with single or multipass welding. This wire contents low carbon, medium manganese and low silicon. In combination with below listed Flux, it is recommended for joint welding of general and fine grained structural steels, shipbuilding steels, bridge constructions, pressure vessels and pipe steels up to 420 Mpa. Min. Yield Strength.</p> <p>For information regarding the sub-arc welding flux, refer our separate data sheet.</p> | | | | | | |
| Base Materials | | | | | | |
| General structural steels up to A 572 Gr. 50 - A 678 Gr. A, Boiler plates up to A516 Gr. 60, especially for pipe steel up to API 5LX Gr. 52 and unalloyed boiler tubes. | | | | | | |
| Typical analysis of the wire and of all-weld metal (wt.-%) | | | | | | |
| | C | Si | Mn | P | S | |
| Wire | 0.10 | 0.22 | 1.05 | ≤0.015 | ≤0.015 | |
| Weld Metal | 0.09 | 0.31 | 1.14 | ≤0.015 | ≤0.015 | |
| Mechanical properties of all-weld metal (As Welded) | | | | | | |
| Union S EM12K with flux combination | Yield strength R _e N/mm ² | Tensile strength R _m N/mm ² | Elongation (L ₀ =5d ₀) | Impact work ISO-V KV J | | |
| | MPa | MPa | % | -20 °C | -40 °C | -60 °C |
| UV418TT | ≥ 420 | ≥ 530 | ≥ 30 | ≥ 150 | ≥ 120 | ≥ 100 |
| UV620 | ≥ 505 | ≥ 570 | ≥ 33 | ≥ 100 | ≥ 70 | - |
| Welding Recommendation | | | | | | |
| SAW – Single wire process DCEP or AC Interpass temp. 180 - 220°C, Preheat according to base material | | | | | | |
| Approvals | | | | | | |
| ABS (4YM) | | | | | | |
| Size and Packaging | | | | | | |
| Size mm | Spooling | | | Weight (Kg) | | |
| 1.6 | Basket/Basketless | | | 25 | | |
| 2.0 | Basket/Basketless | | | 25 | | |
| 2.4 | Basket/Basketless | | | 25 | | |
| 3.2 | Basket/Basketless | | | 25 | | |
| 4.0 | Basket/Basketless | | | 25 | | |