

## Classification

AWS A5.23 : EB3R

ISO 24598-A : S S CrMo2

## Description & Applications

Solid wire alloyed with Cr and Mo for submerged arc welding of creep resisting steels with 2.25% Chromium – 1.0% Molybdenum. Resistant to high service temperature up to 600°C. Nice aspect of the weld bead.

**Main applications:** Petrochemical industry, chemical industry.

**Base material:**

**Creep resisting steels:**

| EN            | ASTM              |
|---------------|-------------------|
| 10CrMo 9-10   | A 182 gr F22      |
| 12CrMo 9-10   | A 199 gr T21, T22 |
| G-17CrMo 9-10 | A 200 gr T21, T22 |
|               | A 213 gr T22      |
|               | A 217 gr WC9      |
|               | A 234 gr WP22     |
|               | A 335 gr P22      |
|               | A 387 gr 21, 22   |

## Typical Chemical Composition ( % )

|      | C    | Si    | Mn    | Cr    | Ni    | Mo    | Cu    | Nb    |
|------|------|-------|-------|-------|-------|-------|-------|-------|
| Min  | 0.08 | 0.05  | 0.40  | 2.25  |       | 0.90  |       |       |
| Max  | 0.15 | 0.25  | 0.70  | 2.8   | 0.3   | 1.10  | 0.15  | 0.01  |
| Type | 0.11 | 0.15  | 0.60  | 2.5   | 0.03  | 1.0   | 0.10  | 0.005 |
|      | V    | P     | S     | As    | Sn    | Sb    | A/T   |       |
| Min  |      |       |       |       |       |       |       |       |
| Max  | 0.03 | 0.010 | 0.010 | 0.005 | 0.005 | 0.005 | 0.50  |       |
| Type | 0.01 | 0.008 | 0.005 | 0.003 | 0.002 | 0.002 | <0.50 |       |

## Welding Current & Instructions

| Welding mode    | Wire Ø (mm) | Welding parameters |             |                |                | Flux    |
|-----------------|-------------|--------------------|-------------|----------------|----------------|---------|
|                 |             | Current (A)        | Voltage (V) | Stick out (mm) | Speed (cm/min) |         |
| SAW<br>AC / = + | 2.4         | 200 - 400          | 25 - 30     | 18             | 40 - 60        | UP BF10 |
|                 | 3.2         | 300 - 500          | 28 - 32     | 20             | 40 - 60        |         |
|                 | 4.0         | 500 - 700          | 30 - 35     | 22             | 50 - 60        |         |