

# OK Autrod 12.64

A copper coated, G4Si1/ER70S-6 solid wire for GMAW of general structural and engineering unalloyed and low-alloyed carbon-manganese steels. Compared with OK Autrod 12.51, OK Autrod 12.64 has a slightly higher silicon and manganese content, which increases the weld metal strength. The high silicon content promotes low sensitivity to surface impurities and contributes to smooth, sound welds. The electrode may be welded with either a gas mixture or with pure CO<sub>2</sub> as the shielding gas.

OK Autrod 12.64 can even be delivered in the unique Esab Octagonal Marathon Pac, which is an excellent choice in mechanised welding applications.

|                             |                                                                                                                                                                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Klasyfikacja stopiwa</b> | EN ISO 636-A : W 46 3 4Si1<br>EN ISO 14341-A : G 42 3 C1 4Si1<br>EN ISO 14341-A : G 46 5 M21 4Si1                                                                                                                                    |
| <b>Klasyfikacja drutu</b>   | SFA/AWS A5.18 : ER70S-6<br>EN ISO 636-A : W4Si1<br>EN ISO 14341-A : G 4Si1                                                                                                                                                           |
| <b>Dopuszczenia</b>         | ABS 3YSA<br>BV SA3YM<br>CE EN 13479<br>CWB B-G 49A 3 C1 S6<br>DB 42.039.11<br>DNV-GL III YMS (C1)<br>DNV-GL III YMS (M21)<br>DNV-GL III YMS<br>LR 3YS H15 (C1)<br>LR 3YS H15 (M21)<br>NAKS/HAKC 1.2-1.6 mm<br>RS 3YMS<br>VdTUV 04294 |

Atesty zależne są od lokalizacji zakładu. W celu otrzymania dalszych informacji prosimy skontaktować się z przedstawicielem ESAB.

|                     |                                        |
|---------------------|----------------------------------------|
| <b>Rodzaj stopu</b> | Carbon-manganese steel (Mn/Si-alloyed) |
| <b>Gaz osłonowy</b> | M20, M21, C1 (EN ISO 14175)            |

## Typowe właściwości mechaniczne

| Warunki                               | Granica plastyczności | Wytrzymałość na rozciąganie | Wydłużenie względne |
|---------------------------------------|-----------------------|-----------------------------|---------------------|
| <b>AWS CO<sub>2</sub> (C1)</b>        |                       |                             |                     |
| Po spawaniu                           | 450 MPa               | 550 MPa                     | 30 %                |
| <b>EN 80Ar/20CO<sub>2</sub> (M21)</b> |                       |                             |                     |
| Po spawaniu                           | 490 MPa               | 590 MPa                     | 29 %                |
| Stress Relieved 15hr 620°C            | 385 MPa               | 520 MPa                     | -                   |
| <b>EN CO<sub>2</sub> (C1)</b>         |                       |                             |                     |
| Po spawaniu                           | 460 MPa               | 570 MPa                     | 28 %                |
| <b>EN 80Ar/20CO<sub>2</sub> (M21)</b> |                       |                             |                     |
| Po spawaniu                           | 490 MPa               | 590 MPa                     | 29 %                |
| Stress Relieved 15hr 620°C            | 385 MPa               | 520 MPa                     | -                   |

## Udarność Charpy V

| Warunki                               | Temperatura testu | Udarność KV |
|---------------------------------------|-------------------|-------------|
| <b>EN 80Ar/20CO<sub>2</sub> (M21)</b> |                   |             |
| Po spawaniu                           | 20 °C             | 130 J       |
| Po spawaniu                           | -20 °C            | 120 J       |
| Po spawaniu                           | -30 °C            | 100 J       |
| Po spawaniu                           | -40 °C            | 90 J        |
| Po spawaniu                           | -50 °C            | 80 J        |
| Stress Relieved 15hr 620°C            | 20 °C             | 120 J       |
| Stress Relieved 15hr 620°C            | -20 °C            | 90 J        |
| <b>EN CO<sub>2</sub> (C1)</b>         |                   |             |
| Po spawaniu                           | 20 °C             | 110 J       |
| Po spawaniu                           | -30 °C            | 75 J        |
| <b>AWS CO<sub>2</sub> (C1)</b>        |                   |             |
| Po spawaniu                           | -30 °C            | 100 J       |

## Typowy skład chemiczny stopiwa %

| C    | Mn   | Si   | S     | P     |
|------|------|------|-------|-------|
| 0.09 | 1.08 | 0.70 | 0.013 | 0.013 |

## OK Autrod 12.64

### Skład drutu %

| C     | Mn   | Si   |
|-------|------|------|
| 0.074 | 1.68 | 0.95 |

### Dane wydajności stopiwa

| Średnica | A         | V       | Prędkość podawania drutu | Wydajność stopiwa |
|----------|-----------|---------|--------------------------|-------------------|
| 0.8 mm   | 60-185 A  | 18-24 V | 3.2-10.0 m/min           | 0.8-2.5 kg/h      |
| 0.9 mm   | 70-250 A  | 18-26 V | 3.0-12.0 m/min           | 0.8-3.3 kg/h      |
| 1.0 mm   | 80-300 A  | 18-32 V | 2.7-15.0 m/min           | 1.0-5.5 kg/h      |
| 1.2 mm   | 120-380 A | 18-35 V | 2.3-15.0 m/min           | 1.2-8.0 kg/h      |
| 1.4 mm   | 150-420 A | 22-36 V | 2.5-12.0 m/min           | 1.7-8.5 kg/h      |
| 1.6 mm   | 225-550 A | 28-38 V | 2.3-12.0 m/min           | 2.1-11.4 kg/h     |
| 2.0 mm   | 300-650 A | 32-44 V | 4.0-15.0 m/min           | 3.2-12.5 kg/h     |