

## Sureweld 7024



Sureweld 7024 is a high speed, heavy-coated, iron powder electrode for high deposition rates on horizontal and downhand welding. Excellent operator appeal, produces equal 45 deg; fillets, thereby eliminating over welding. Excellent bead appearance and self-cleaning slag. This electrode has good weldability and superior mechanical properties. It is particularly useful in obtaining increased penetration with little or no root porosity in horizontal or positioned fillets. Sureweld 7024 is ideal for making high speed horizontal fillet and lap welds on mild and some alloy steels, such as earthmoving and construction equipment, truck bodies, ships, barges and railcars. Sureweld 7024 exceeds the AWS A5.1 elongation % and Charpy V-Notch requirements for 7024-1.

|                        |  |
|------------------------|--|
| <b>Classifications</b> | AWS A5.1 : E7024<br>ASME SFA 5.1   |
| <b>Approvals</b>       | ABS<br>CWB CSA W48 E4924   |
| <b>Industry</b>        | Barges<br>Industrial and General Fabrication<br>Mobile Equipment<br>Railcars |

Approvals are based on factory location. Please contact ESAB for more information.

|                        |                      |
|------------------------|----------------------|
| <b>Welding Current</b> | DC+, DC- or AC       |
| <b>Coating Type</b>    | Iron powder, titania |

### Typical Tensile Properties

| Condition | Yield Strength   | Tensile Strength | Reduction in Area | Elongation |
|-----------|------------------|------------------|-------------------|------------|
| As Welded | 490 MPa (71 ksi) | 550 MPa (81 ksi) | 63 %              | 26 %       |

### Typical Charpy V-Notch Properties

| Condition | Testing Temperature | Impact Value    |
|-----------|---------------------|-----------------|
| As Welded | -18 °C (0 °F)       | 34 J (25 ft-lb) |

### Typical Weld Metal Analysis %

| C    | Mn   | Si   | S     | P    |
|------|------|------|-------|------|
| 0.06 | 0.80 | 0.30 | 0.018 | 0.01 |

### Deposition Data

| Diameter             | Optimal Amps | Current   | Deposition Rate         | Deposition Efficiency % |
|----------------------|--------------|-----------|-------------------------|-------------------------|
| 4.0 mm<br>(5/32 in.) | 180 A        | 180-240 A | 2.4 kg/h<br>(5.3 lb/h)  | 71.3 %                  |
| 4.0 mm<br>(5/32 in.) | 210 A        | 180-240 A | 2.9 kg/h<br>(6.3 lb/h)  | 72.5 %                  |
| 4.0 mm<br>(5/32 in.) | 240 A        | 180-240 A | 3.3 kg/h<br>(7.2 lb/h)  | 69.4 %                  |
| 4.8 mm<br>(3/16 in.) | 245 A        | 250-290 A | 3.4 kg/h<br>(7.5 lb/h)  | 69.2 %                  |
| 4.8 mm<br>(3/16 in.) | 270 A        | 250-290 A | 3.8 kg/h<br>(8.3 lb/h)  | 70.5 %                  |
| 4.8 mm<br>(3/16 in.) | 290 A        | 250-290 A | 4.1 kg/h<br>(9.1 lb/h)  | 68 %                    |
| 5.6 mm<br>(7/32 in.) | 320 A        | 300-340 A | 4.3 kg/h<br>(9.4 lb/h)  | 72.4 %                  |
| 5.6 mm<br>(7/32 in.) | 360 A        | 300-340 A | 5.3 kg/h<br>(11.6 lb/h) | 69.1 %                  |
| 6.4 mm<br>(1/4 in.)  | 400 A        | 350-400 A | 5.7 kg/h<br>(12.6 lb/h) | 71.7 %                  |