



# DAIKOFCW 66B



CARBON STEELS

WEATHERING STEEL-Cor-Ten®

## DESCRIPTION

All position basic flux cored wire for welding weathering steels

Flux cored wire with Ni-Cu-Cr additions mainly used for weathering steels. Applications include architectural structures, bridges and exhaust gas flues. The wire shows excellent weldability in flat and horizontal position, smooth and bright bead, very low spatter losses, easy to remove slag and exceptional mechanical properties even at low temperatures.

## SPECIFICATIONS

|                |                |                  |       |
|----------------|----------------|------------------|-------|
| ISO 17632-A    | T 46 4 Z P M 1 | AWS A5.36        | E80T5 |
| DIN            | -              | Werkstoff Number | -     |
| Certifications | -              | Shielding        | M21   |
| Positions      | PA, PB, PC     | Current          | DC+   |

## ASME QUALIFICATIONS

|              |   |
|--------------|---|
| F-No (QW432) | 6 |
| A-No (QW442) | 1 |

## FERRITE

|         |   |
|---------|---|
| FERRITE | - |
|---------|---|

## PREN

|      |   |
|------|---|
| PREN | - |
|------|---|

## HARDNESS

|          |   |
|----------|---|
| HARDNESS | - |
|----------|---|

## CHEM. COMP. %

### DEFAULT

|    |      |
|----|------|
| C  | 0.05 |
| Mn | 1.2  |
| Ni | 1.2  |
| Cr | 0.3  |
| P  | 0.02 |
| S  | 0.02 |
| Si | 0.45 |
| Cu | 0.5  |

## MECHANICAL PROPERTIES

|   | MIN         | VARIANT     |
|---|-------------|-------------|
| Tensile strength R <sub>m</sub> MPa               | 550         | 590         |
| Yield strength R <sub>p0.2</sub> MPa              | 460         | 430         |
| Elongation A (L <sub>0</sub> =5d <sub>0</sub> ) % | 17          | 20          |
| Impact Charpy ISO-V                               | 47J @ -40°C | 47J @ -40°C |
| Impact Charpy ISO-V                               | -           | -           |

## WELDING PARAMETERS

|                | 1.2 mm             | 1.6 mm             |
|----------------|--------------------|--------------------|
| Ampere         | 130A - 290A        | 170A - 400A        |
| Voltage        | 18V - 30V          | 28V - 32V          |
| Packaging      | Ø 1,0÷1,6mm        | Ø 1,0÷1,6mm        |
| Packaging Type | B5300, D200 spools | B5300, D200 spools |

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The information in this datasheet is the result of detailed research and is considered accurate as of the publication date. However, we cannot guarantee its complete accuracy, and it is subject to change without notice. Actual results may vary due to many factors like welding procedures, material composition, temperature conditions, bevel configuration, and specific manufacturing techniques. We accept no liability for any errors or omissions in this datasheet. For the most current information, please visit [www.daikowelding.com](http://www.daikowelding.com).





# WEATHERING STEEL-Cor-Ten®

DESCRIPTION

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WEATHERING STEEL-Cor-Ten®

## APPLICATION

Primarily engineered for weathering steels that incorporate a controlled copper addition, this weld metal offers an enhanced level of corrosion resistance and a more stable patina compared to plain carbon-manganese (C-Mn) steel. It finds versatile applications in architectural structures, bridges, exhaust gas flues, and chimneys. The weld metal stands out for its robust resistance to preferential corrosion in seawater, particularly in the harsh conditions of arctic waters characterized by heightened levels of oxygen and salinity. Its utility extends to welding micro-alloyed and C-Mn steels, making it a valuable choice for fabricating ice-breaker vessels and offshore structures. To optimize the welding process, a thoughtful approach to preheating, based on joint thickness and restraint considerations, is advisable. Typically, the material is left in the as-welded condition, eliminating the necessity for post-weld heat treatment (PWHT). This characteristic underscores the material's efficiency and practicality in various welding applications, ensuring reliable performance in corrosive and challenging environmental conditions.

## ALLOY TYPE

Low alloy steel with Ni-Cu-Cr additions for welding weathering steels.

## MICROSTRUCTURE

In the as-welded condition the microstructure is ferritic with a high proportion of acicular ferrite for optimum toughness.

## MATERIALS

**EN W.Nr.:** S235JRW (1.8960), S235J2W (1.8961), S235J0W (1.8958), S275J0W, S275J2W, S355J0W (1.8959), S355J2W (1.8963), S355J0WP (1.8945).

**ASTM:** A588 gr. A, B, C, K, A242 gr. 1, 2.

**PROPRIETARY:** Cor-Ten® A, B (US Steel), Patinax® (Thyssenkrupp).

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