



# DAIKOWT 66



CARBON STEELS

WEATHERING STEEL-Cor-Ten®

## DESCRIPTION

Rod with Ni-Cu-Cr additions designed for weather-resistant steel

Copper-coated rod, low-alloyed with Ni, Cu, and Cr additions, developed for welding weather-resistant steels. Its chemical composition and mechanical properties of the filler metal make it suitable also for high tensile strength steels. Ideal for the construction of containers, tanks, bridges, structural panels, chimneys, transportation vehicles, and offshore platforms, it offers good resistance to atmospheric corrosion and saltwater.

## SPECIFICATIONS

EN ISO 636-A	W 46 5 M21 Z	AWS A5.28	ER80S-G
Shielding	11	Positions	PA, PB, PC, PD, PE, PF
Current	DC-	Packaging Type	5kg carton tube

## ASME QUALIFICATIONS

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

## CHEM. COMP. %

C	0.09
Mn	1.4
Ni	0.8
Cr	0.3
P	0.01
S	0.007
Mo	0.01
Si	0.8
Cu	0.4

## MECHANICAL PROPERTIES

	MIN. PER STANDARD	PRODUCT
Tensile strength $R_m$ MPa	550	630
Yield strength $R_{p0.2}$ MPa	500	560
Elongation A ( $L_0=5d_0$ ) %	24	24
Impact Charpy ISO-V	47J @ -50°C	60J @ -50°C
Impact Charpy ISO-V	-	-

## WELDING PARAMETERS

	1.6 mm	2.4 mm
Ampere	95A - 135A	145A - 205A
Voltage	-	-
Packaging	Ø 1,2÷3,2 mm	Ø 1,2÷3,2 mm
Packaging Type	5kg carton tube	5kg carton tube





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## APPLICATION

This type of steel is primarily used for constructing structures with weather-resistant steels, thanks to precise control of copper addition. This ensures corrosion resistance three times higher and a more stable patina compared to traditional carbon-manganese (C-Mn) steel. Its applications include architectural structures, bridges, drainpipes, and chimneys. It is particularly effective against corrosion in seawater, especially in harsh arctic waters with high oxygenation and salinity. It is often used in the welding of microalloyed and C-Mn steels for icebreaker ships and offshore structures. It is essential to preheat based on the thickness of the joint and its restraint. Typically, the material is left in the 'as-welded' condition, without further treatments.

## 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)

