



DAIKOFCW 107B



CARBON STEELS
STRUCTURAL STEEL

DESCRIPTION

Basic flux cored wire for flat and horizontal position

Flux cored wire for single or multilayer welding of carbon, carbon-manganese steels and similar steels, including fine grain steels. Main features include 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. This wire is especially suitable for welding components of different material or as buffer layer for hardfacing applications.

SPECIFICATIONS

ISO 17632-A	T 46 4 B M 3	AWS A5.36	E70T5
DIN	-	Werkstoff Number	-
Certifications	-	Shielding	M21
Positions	PA, PB, PC	Current	DC+

ASME QUALIFICATIONS	FERRITE	PREN	HARDNESS
F-No (QW432) 6	-	-	-
A-No (QW442) 1	-	-	-

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN	VARIANT
C	0.08	Tensile strength R_m MPa	530	550
Mn	1.3	Yield strength $R_{p0.2}$ MPa	460	460
Ni	0.04	Elongation A ($L_0=5d_0$) %	20	20
Cr	0.04	Impact Charpy ISO-V	47J @ -40°C	47J @ -40°C
P	0.01	Impact Charpy ISO-V	-	-
S	0.011			
Si	0.4			
Cu	0.02			
		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	BS300, D200 spools	BS300, 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.





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APPLICATION

Carbon-manganese (C-Mn) steels serve as the predominant structural steels extensively used across various applications in the engineering industry. Successful welding of C-Mn steel fabrications is generally achievable, provided the steel composition is known, necessary precautions are taken, and qualified procedures are adhered to. Weldability varies among C-Mn steels, with potential cracking mechanisms, including hydrogen cracking, solidification cracking, and reheat cracking, depending on specific circumstances. These consumables effectively resist such issues, emphasizing the importance of a meticulous welding procedure. While preheat and post-weld heat treatment (PWHT) may not be universally required, the actual specifications depend on the grade and thickness of the base material being welded. Attaining the required mechanical properties in a welded joint with C-Mn steels is achievable through the use of appropriate welding consumables. However, the intricate structural changes during the weld thermal cycle necessitate careful evaluation of properties such as heat-affected zone (HAZ) toughness and hardness.

ALLOY TYPE

Consumables for welding mild and C-Mn steels of 340-510MPa tensile strength.

MICROSTRUCTURE

Predominantly ferrite.

MATERIALS

EN W.Nr.: EN AW-Al 99,0 (1200), EN AW-Al 99,7 (1070A), EN AW-Al 99,5 (1050A), EN AW-Al 99,5 (1350), EN AW-Al 99,8 (1080A).

