CARBOFIL 1

MIG/MAG solid wires-TIG rods
C-Mn and low-alloy steels

CARBOFIL 1 is a copper coated G3Si1/ER70S-6 type solid MAG welding wire supplied both random and precision layer wound, depositing C-1.1%Mn weld metal, for welding a wide range of mild and C-Mn structural steels. Suitable for welding with CO2 and Ar-based mixed shielding gases.

CARBOFIL 1 is a welding wire electrode used for general applications in both single- and multipass welding. Especially suited for sheet metal applications where smooth weld beads are required. Weld metal impact toughness properties are down to -40°C.

CARBOFIL 1 is available with a wide range of packaging format from few kgs for small MIG/MAG welding equipments to high-quantity (max. 550 kgs drum) robotic application.

Classification	
EN ISO	14341-A: G 42 3 C1 3Si1
EN ISO	14341-A: G 42 4 M21 3Si1
AWS	A5.18: ER 70S-6

Approvals	Grade
ABS	3SA
ABS	3YSA
DB	●
DNV	IIIYMS
GL	3YS
LRS	3YS H15
RINA	3YS
TÜV	●

CE

Chemical analysis (Typical values in %)

	C	Mn	Si	P	S
Wire	0.08	1.5	0.9	≤ 0.025	≤ 0.025
All weld metal (*)	0.08	1.1	0.6	≤ 0.025	≤ 0.025
All weld metal (**)	0.09	1.0	0.5	≤ 0.025	≤ 0.025

(*) 82% Ar+18% CO2, (**) 100% CO2

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)		
				+20 °C	-30 °C	-40 °C
As Welded (*)	≥ 420	500-640	≥ 24	≥ 90	≥ 70	≥ 47
As Welded (**)	≥ 420	500-640	≥ 22	≥ 70	≥ 47	

Gas test: (*) 82% Ar+18% CO2, (**) 100% CO2

Shielding Gas - EN ISO 14175 : C1, M14, M2, M3

Materials

S(P)235 - S(P)355; GP240; GP280

Storage
Keep dry and avoid condensation

Current condition and welding position
DC+

Packaging data

Packaging Type	B300	BS300	DRUM		S200	S300	SUPA			
Diam(mm) / weight(kg)	16	16	200	300	5	15	150	300	450	550
0.6	●				●	●				
0.8	●	●			●	●				
0.9	●									
1.0	●	●			●	●			●	●
1.2	●	●		●	●	●	●	●	●	●
1.6	●		●					●	●	●