

# SF 113

Submerged Arc Welding Flux - Unalloyed & Low Alloyed Steels

## Standards

EN ISO 14174	S A MS/CS 1
TS EN ISO 14174	S A MS/CS 1

## Properties and Applications

Agglomerated, manganese-silicate type flux for welding general structural steels and pipe steels. Provides sound welds in steels containing low silicon and manganese. Especially suitable for fillet and groove welds in steel constructions, LPG cylinder, pressure vessel production, spirally welding of pipes. Suitable to use at high welding speeds with single and multi-wires. Possible to use both in alternative and direct currents. Good wetting properties blending into the base metal, very easy slag removal in fillet and V-grooves. Provides flat and nice weld profile without undercut.

## Typical Chemical Values of Weld Metal

Welding Wire	Type of Analysis	C	Si	Mn	Mo
SW 701	Weld Deposit	0.04	0.45	1.45	
SW 702	Weld Deposit	0.04	0.40	1.80	
SW 702 Mo	Weld Deposit	0.04	0.50	1.65	0.45
SW 702Si	Weld Deposit	0.04	0.65	1.90	

## Typical Mechanical Values of Weld Metal

Test Condition	Welding Wire	Yield Strength (N/mm <sup>2</sup> )	Tensile Strength (N/mm <sup>2</sup> )	Elongation A5 (%)	Charpy V-Notch Properties (J)	
As welded	SW 701	400	500	30	0°C → 70	-20°C → 60
As welded	SW 702	425	540	30	0°C → 65	-20°C → 55
As welded	SW 702 Mo	515	590	28	0°C → 60	-20°C → 50
As welded	SW 702Si	450	550	30	0°C → 60	-20°C → 50

## Wire-Flux Combinations Standards

Welding Wire	EN Designation of Wire	EN ISO/TS EN ISO 14171 - A	AWS Designation of Wire	AWS/ASME SFA 5.17/SFA 5.23
SW 701	S1	S 38 2 CS/MS S1	EL12	F7A2-EL12
SW 702	S2	S 42 2 MS/CS S2	EM12	F7A2-EM12
SW 702 Mo	S2Mo	S 46 2 MS/CS S2Mo	EA2	F8A2-EA2
SW 702Si	S2Si	S 42 3 AB S2Si	EM12K	F7A2-EM12K

## Application Information

Welding Positions

PA PB PC

Welding Parameters & Efficiency

Polarity:

## Packaging Information

Product Code	Quantity per Box	Box Gross Weight (kg)	Boxes per Outer Box	Outer Box Gross Weight (kg)	Packaging Type
401060AGM2	25 kg	25.60	1	25.60	Craft Bag

## Storage & Re-Drying Information

Generally not required. If required, redry for 1 hour at 110°C.  
During transportation and storage, it should be ensured that the packaging is not damaged or torn.  
It should be stored in a dry room (relative humidity < 50%, room temperature > 20°C) on wooden pallets.  
It has to be dried at 350°C for 2 hours.