

FLUXOFIL 31 is a seamless copper coated basic flux cored wire. The operating features produce very crack resistant and tough welded joints with very low hydrogen content, especially when welding steels with a higher carbon content. Pore-free welds with easy slag removal. Weld metal with very low content of diffusible hydrogen (HD < 3 ml/100g deposited weld metal). A low-slag variant FLUXOFIL 31 S is available to order.

Classification	
EN ISO	17632-A: T 42 4 B C 2 H5
EN ISO	17632-A: T 42 4 B M 2 H5
EN ISO	17632-B: T494T5-1CA-UH5
EN ISO	17632-B: T494T5-1MA-UH5
AWS	A5.20: E70T-5C-JH4
AWS	A5.20: E70T-5M-JH4
AWS	A5.36: E70T5-C1A4-CS1-H4
AWS	A5.36: E70T5-M21A4-CS1-H4

Approvals	Grade
ABS	3YSA H5
BV	SA3-3YM H5
DB	●
DNV	IIIY40MS H5
GL	3YH5S
LRS	3S-3YS-H5
PRS	3S-3YS H5
TÜV	●

CE

Chemical analysis (Typical values in %)

	C	Mn	Si	P	S
All weld metal (**)	0.05	1.2	0.3	≤ 0.010	≤ 0.010

(**) 100% CO₂

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)
				-40 °C
As Welded	≥ 420	500-640	≥ 25	≥ 80

Gas test: 100% CO₂

Shielding Gas - EN ISO 14175 : M21,C1

Materials

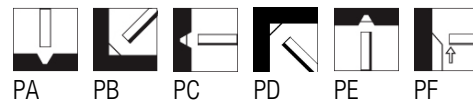
S(P)235-S(P)420, GP240-GP280

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281166
1.4	W000281168
1.6	W000281169

FLUXOFIL 31 S is a seamless copper coated basic flux cored wire and is a slag-reduced version of FLUXOFIL 31, producing weld metal with excellent mechanical properties. Suitable for depositing very crack resistant and tough welded joints, especially when welding steels having a higher carbon content. Pore-free welds, easy slag removal.

Classification	
EN ISO	17632-A: T 42 4 B C 2 H5
EN ISO	17632-A: T 42 4 B M 2 H5
EN ISO	17632-B: T494T5-1CA-UH5
EN ISO	17632-B: T494T5-1MA-UH5
AWS	A5.36: E70T5-C1A4-CS1-H4
AWS	A5.36: E70T5-M21A4-CS1-H4

Approvals	Grade
ABS	3YSA H5
BV	SA3-3YM H5
DB	●
DNV	IIIV40MS H5
GL	3YH5S

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.05	1.2	0.3	≤ 0.010	≤ 0.010

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)
				-40 °C
As Welded	≥ 420	500-640	≥ 25	≥ 80

Gas test: 100% CO₂

Shielding Gas - EN ISO 14175 : M21,C1

Materials

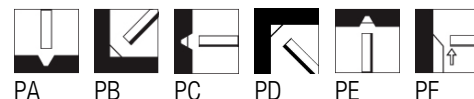
S(P)235-S(P)420, GP240-GP280

Storage

Keep dry and avoid condensation

Current condition and welding position

DC-



Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281172
1.4	W000281174
1.6	W000281175

FLUXOFIL M8 is a seamless copper coated metal cored wire with outstanding welding characteristics in short-arc and spray-arc ranges depositing slag free weld metal. Almost spatter-free when welding in the spray-arc range. Good restriking, even with a cold wire tip, thus being suitable for robotic applications. Characteristic features: high deposition rate and welding speed, good side wall fusion, finely rippled welds, without undercut into the base metal, even on contaminated or corroded metal surfaces. Little formation of silicates on the weld surface, so multi-pass welds can be made without inter-run cleaning. Due to an easily controllable weld pool in the short-arc range, FLUXOFIL M8 is well-suited for root- and positional welding and gap bridging.

Classification	
EN ISO	17632-A: T 46 2 M M 1 H5
EN ISO	17632-B: T552T15-1MA-UH5
AWS	A5.18: E70C-3M H4
AWS	A5.36: E71T15-M21A2-CS1-H4

Approvals	Grade
BV	SA3-3YM H5
DB	●
DNV	IIY40MS H5
GL	3Y40H5S
LRS	3Y40SH5
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.07	1.3	0.7	0.010	0.010

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)
				-20 °C
As Welded	≥ 460	550-680	≥ 24	≥ 50

Gas test: 82% Ar+18% CO₂

Shielding Gas - EN ISO 14175 : M21

Materials

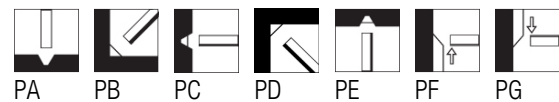
S(P)235-S(P)460

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



Packaging data

Packaging Type Diam(mm) / weight(kg)	B300	DRUM
	16	200
1.0	W000281001	W000281002
1.2	W000281004	W000281006
1.4	W000281008	W000281009
1.6	W000281011	W000281012

FLUXOFIL M10 is a seamless copper coated metal cored wire with outstanding welding properties in the short-arc and spray-arc ranges depositing slag free weld metal. Almost spatter-free when welding in the spray-arc range. Good restriking, even with a cold wire tip, thus being suitable for robotic applications. Characteristic features: good side wall fusion, smooth and finely rippled welds without undercut into the base metal. Little formation of silicates on top of weld, so that multi-pass welds can be made without inter-run cleaning. Due to an easily controllable weld pool in the short-arc range, FLUXOFIL M 10 is well-suited for root- and positional welding.

Classification	
EN ISO	17632-A: T 46 4 M M 1 H5
EN ISO	17632-B: T494T15-1MA-UH5
AWS	A5.18: E70C-6M H4
AWS	A5.36: E71T15-M21A4-CS1-H4

Approvals	Grade
ABS	4YSA H5
BV	SA3Y M H5 KV40
DB	●
DNV	IVY40MS H5
GL	4YH5S
LRS	4Y40S H5
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.08	1.5	0.4	0.010	0.010

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)
				-40 °C
580°C x 2 h/furnace	≥ 460	550-680	≥ 24	≥ 80
As Welded	≥ 460	550-680	≥ 24	≥ 60

Gas test: 82% Ar+18% CO₂

Shielding Gas - EN ISO 14175 : M21

Materials

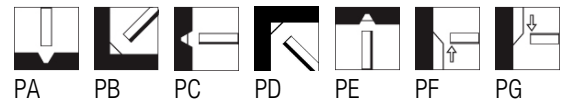
S(P)235-S(P)460, GP240-GP280

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



Packaging data

Packaging Type	B300	DRUM
Diam(mm) / weight(kg)	16	200
1.0	W000281014	
1.2	W000281017	W000281019
1.6	W000281022	W000281024

FLUXOFIL M 10 S



CE

MIG/MAG Cored Wires
C-Mn and low-alloy steels

FLUXOFIL M10S is a seamless copper coated metal cored wire producing no slag, for welding with both the single and multi-run techniques. Excellent weldability, high deposition rate, very good impact toughness at low temperatures, down to -60°C, both as welded and following post-weld heat treatment. Suitable for applications where very high toughness properties are required.

Classification

EN ISO	17632-A: T 42 6 M M 1 H5
EN ISO	17632-B: T496T15-1MA-UH5
AWS	A5.18: E70C-6M H4
AWS	A5.36: E71T15-M21A8-CS1-H4

Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.07	1.6	0.4	0.010	0.010

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)
				-60 °C
As Welded	≥ 420	500-640	≥ 26	≥ 60
620°C x 1h	≥ 420	500-640	≥ 27	≥ 80

Gas test: 82% Ar+18% CO₂

Shielding Gas - EN ISO 14175 : M21

Materials

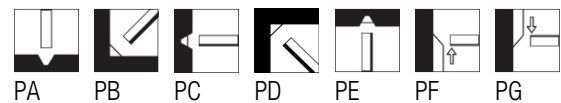
S(P)235-S(P)420, GP240-GP280

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



Packaging data

Packaging Type	B300	DRUM
Diam(mm) / weight(kg)	16	200
1.2	W000281027	W000281028

FLUXOFIL 14 HD is a seamless copper coated rutile flux cored wire with an enhanced degree of fill for gas-shielded metal arc welding of unalloyed steels for operating temperatures from -30°C up to +450°C. Due to its easily controllable weld pool, the welding characteristics are outstanding. It can be welded in all positions with only one parameter setting (24 Volts, wire feed 9m/min, wire dia. 1,2 mm). The enhanced degree of filling results in increased current carrying capacity and deposition rate, thus increasing welding speed and leading to a saving of time and costs. Low spatter loss, easy slag removal, smooth and finely rippled welds are produced without undercut into the base metal. Preferably used under mixed gas. The use of CO2 is possible.

Classification	
EN ISO	17632-A: T 46 2 P C 1 H5
EN ISO	17632-A: T 46 3 P M 1 H5
EN ISO	17632-B: T492T1-1CA-UH5
EN ISO	17632-B: T493T1-1MA-UH5
AWS	A5.20: E71T-1C-H4
AWS	A5.20: E71T-1M-JH4
AWS	A5.36: E71T1-C1A0-CS1-H4
AWS	A5.36: E71T1-M21A4-CS1-H4

Approvals	Grade
ABS	3Y40SA H5
BV	SA3Y40M H5
DB	●
DNV	IIY40MS H5
GL	3Y40H5S
LRS	3Y40S H5
PRS	3S-3Y40SH5
RMRS	3S-3Y40S H5
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.05	1.4	0.5	≤ 0.010	≤ 0.010

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				-20 °C	-30 °C
As Welded	≥ 460	550-650	≥ 24	≥ 80	≥ 50

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : C1, M21

Materials

Shipbuilding steels A, B, D, DH VL 32 - 46

X42 - X65

S(P)235-S(P)460

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



FLUXOFIL 14 HD



FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

Packaging data

Packaging Type	B300	DRUM	S200
Diam(mm) / weight(kg)	16	200	5
1.0	W000281097		
1.2	W000281099	W000281100	W000281098
1.4	W000281102		
1.6	W000281105		

FLUXOFIL 14 is a seamless copper coated rutile flux cored wire with a fast-freezing slag. Due to an easily controllable weld pool, it shows outstanding welding characteristics in all positions. It is particularly suitable for partly and fully mechanized welding of girth seams in pipelines. In MAG-orbital welding in the 6 to 12 o'clock position, 1.2-1.4 mm electrodes, are preferred. Low spatter loss, easy slag removal, smooth finely rippled welds without undercut into the base metal are outstanding features.

Classification

EN ISO	T 46 4 P M1 H5
AWS	A5.36: E71T1-M21A4-CS1-H4

Approvals

Approvals	Grade
ABS	3YSA H5
BV	SA3YM H5
DNV	IIY46MS H5
GL	3YH5S

Approvals

Approvals	Grade
LRS	3S-3YS H5
RMRS	3YS H10
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.05	1.2	0.5	≤ 0.010	≤ 0.010

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				-20 °C	-40 °C
As Welded	≥ 460	550-650	≥ 22	≥ 80	≥ 47

Gas test: 82% Ar+18% CO₂

Shielding Gas - EN ISO 14175 : M21

Materials

Shipbuilding steels A,B,D,E,AH32 - EH36

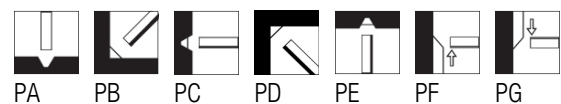
S(P)235-S(P)460, GP240-GP280

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281087

FLUXOFIL 19 HD is a seamless copper coated rutile flux cored wire with an enhanced degree of fill for gas-shielded metal arc welding of unalloyed steels for operating temperatures from -30°C up to +450°C. Due to its easily controllable weld pool, the welding characteristics are outstanding. It can be welded in all positions with only one parameter setting (24 Volts, wire feed 9m/min, wire dia. 1,2 mm). The enhanced degree of filling results in increased current carrying capacity and deposition rate, thus increasing welding speed and leading to a saving of time and costs. Low spatter loss, easy slag removal, smooth and finely rippled welds are produced without undercut into the base metal. To be used under CO2 as shielding gas only.

Classification	
EN ISO	17632-A: T 46 3 P C 1 H5
EN ISO	17632-B: T493T1-1CA-UH5
AWS	A5.20: E71T-1C-JH4
AWS	A5.36: E71T1-C1A4-CS1-H4

Approvals	Grade
ABS	3Y40SA H5
BV	SA3Y40M H5
DB	●
DNV	IIIY40MS H5
GL	3Y40H5S
LRS	3Y40S H5
PRS	3S-3Y40SH5
RINA	3Y40S H5
RMRS	3YMS H5-3Y40MS H5
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.05	1.3	0.5	≤ 0.010	≤ 0.010

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				-20 °C	-30 °C
As Welded	≥ 460	550-650	≥ 24	≥ 80	≥ 50

Gas test: 100% CO2

Shielding Gas - EN ISO 14175 : C1

Materials

S(P)235-S(P)460, GP240-GP280

Shipbuilding steels A,B,D,E,AH32 - EH36

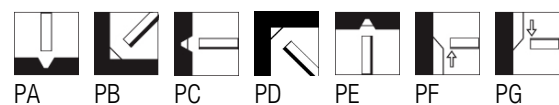
X42 to X65

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



FLUXOFIL 19 HD



FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

Packaging data

Packaging Type	B300	DRUM	S200
Diam(mm) / weight(kg)	16	200	5
1.2	W000281119	W000281120	W000281118
1.6	W000281122	W000281123	

FLUXOFIL 71 is a seamless copper coated rutile flux cored wire for gas-shielded metal arc welding of unalloyed steels for operating temperatures from -20°C up to +450°C. Its new formulation delivers an extremely easily controllable weld pool and outstanding welding characteristics. FLUXOFIL 71 is an ideal solution for positional welding of C-Mn steel for Infrastructures, Shipbuilding and general applications. It can be welded in all positions with only one parameter setting (24 Volts, wire feed 9 m/min with 1,2 mm diam wire). Low spatter loss, easy slag removal, smooth and finely rippled welds are produced without undercut into the base metal. Preferably used under mixed gas. The use of CO2 is possible.

Classification	
EN ISO	17632-A: T 46 2 P C 1 H5
EN ISO	17632-A: T 46 2 P M 1 H5
EN ISO	17632-B: T552T1-1CA-UH5
EN ISO	17632-B: T552T1-1MA-UH5
AWS	A5.20: E71T-1C-H4
AWS	A5.20: E71T-1M-JH4
AWS	A5.36: E71T1-C1A0-CS1-H4
AWS	A5.36: E71T1-M21A0-CS1-H4

Approvals	Grade
ABS	3Y40SA H5
BV	SA3Y40M H5
DB	●
RINA	3Y40SA H5
TÜV	●



Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.05	1.4	0.5	≤ 0.010	≤ 0.010

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)
				-20 °C
As Welded	≥ 460	550-650	≥ 24	≥ 80

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : C1, M21

Materials

S(P)235-S(P)460

Shipbuilding steels A,B,D,E,AH32 - EH36

X42 - X65

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



Packaging data

Packaging Type	B300	DRUM	S200
Diam(mm) / weight(kg)	16	200	5
1.2	W000400964	W000401016	W000401020
1.6	W000401017		
1.0			W000401019