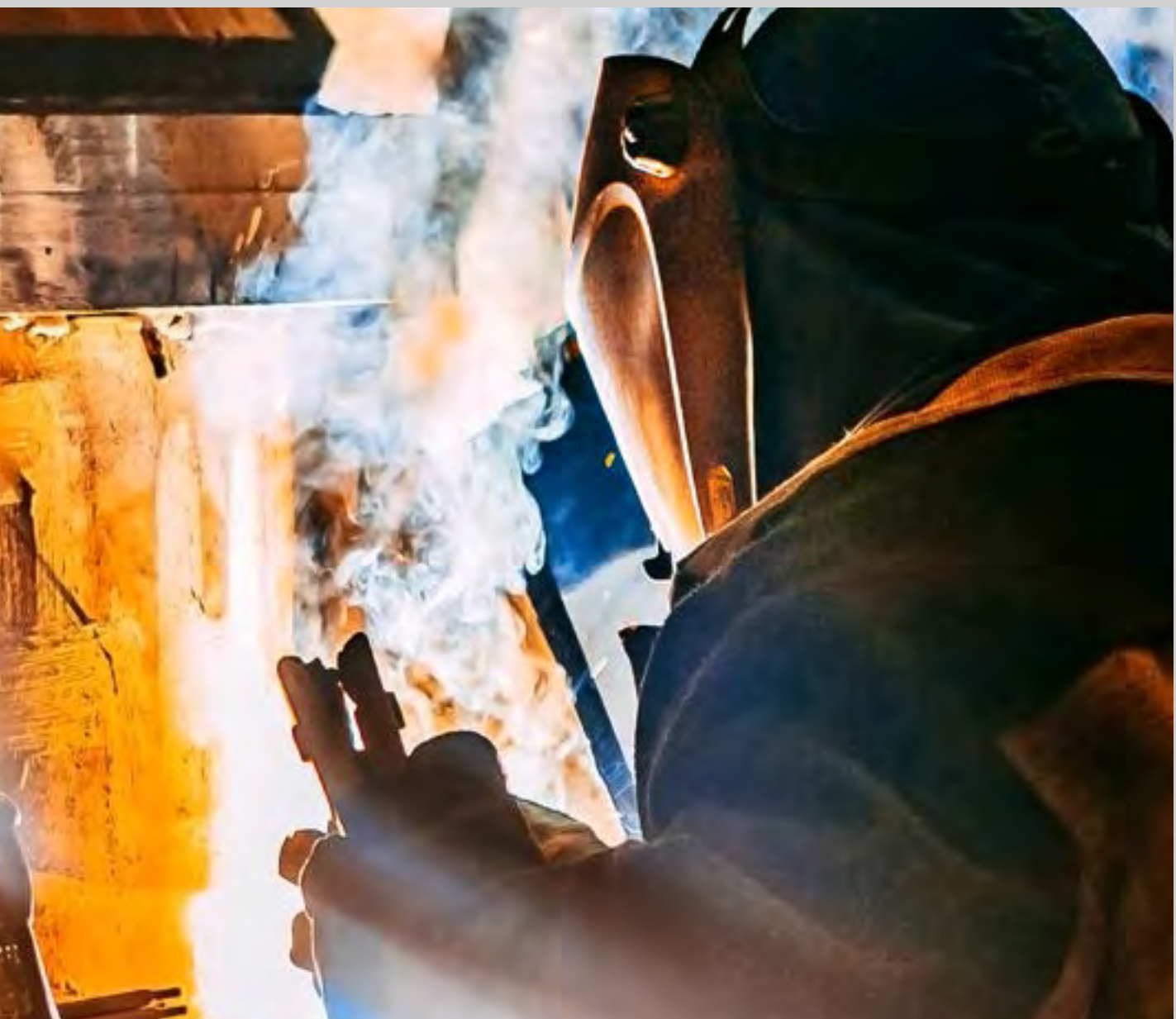




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THE COMPANY



Meltolit was founded in 1963. From the beginning there were only precious metals in the product range but this gradually included silver brazing alloys and copper brass. Eventually welding was included and we now offer a complete range of consumables for welding, brazing and hardfacing.

Our own Meltolit brand includes high quality products for production, repair and maintenance. The company strength has always been quality, know how and flexibility.

We are situated in Gothenburg, Sweden with both main warehouse and head office from where we serve customers around the globe but with focus on Scandinavia.

SOLID UNALLOYED WIRES



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
SG2	Copper coated solid wire suitable for single pass or multipass welding on non alloy steels, for C-Mn steels and for fine grain steels. It can be used for boilers fabrication, industrial machinery construction, car production etc.	SG2 MAG/SG2 TIG	EN ISO 14341-A- G 42 4 C1/M21 3Si1 AWS A5.18 ER70S-6	550	450	>24	-40°C – 80j	0,07	1,45	0,85	<0,15	<0,05	<0,15	<0,02	<0,03	<0,15	<0,25	-	0,6 – 1,6 mm 0,8 – 4,0 mm		
SG3	Copper coated solid wire suitable for single pass or multipass welding on non alloy steels, for C-Mn steels and for fine grain steels. The higher Si-Mn content gives a good bead appearance. It can be used for boilers fabrication, industrial machinery construction, car production etc.	SG3 MAG/SG2 TIG	EN ISO 14341-A- G 46 4 C1/M21 4Si1 AWS A5.18 ER70S-6	590	500	26	-40°C – 80j	0,07	1,7	0,95	<0,15	<0,05	<0,15	<0,02	<0,03	<0,15	<0,25	-	0,6 – 1,6 mm 0,8 – 4,0mm		
EVO2	Solid uncoppered wire suitable for single pass or multipass welding on non alloy steels, for C-Mn steels and for fine grain steels. It can be used for boilers fabrication, industrial machinery construction, car production etc.	EVO2 MAG	EN ISO 14341-A- G 42 4 C1/M21 3Si1 AWS A5.18 ER70S-6	630	440	37	+20°C – 120j	0,07	1,45	0,85	<0,15	<0,05	<0,15	<0,02	<0,03	<0,15	<0,1	-	0,8 – 1,6 mm		
EVO3	Solid uncoppered wire suitable for single pass or multipass welding on non alloy steels, for C-Mn steels and for fine grain steels. The higher Si-Mn content gives a good bead appearance. It can be used for boilers fabrication, industrial machinery construction, car production etc.	EVO3 MAG	EN ISO 14341-A- G 46 4 C1/M21 4Si1 AWS A5.18 ER70S-6	590	500	26	-40°C – 80j	0,07	1,7	0,95	<0,15	<0,05	<0,15	<0,02	<0,03	<0,15	<0,1	-	0,8 – 1,6 mm		
NW3 (NEW WIRE)	Solid uncoppered wire suitable for single pass or multipass welding on non alloy steels, for C-Mn steels and for fine grain steels. The higher Si-Mn content gives a good bead appearance. It can be used for boilers fabrication, industrial machinery construction, car production etc. The NEW WIRE ensure a drastic reduction of splatters and their size and a minimum quantity of silicates on the weld bead with an excellent aesthetic impact.	NW3 MAG	EN ISO 14341-A- G 46 4 C1/M21 4Si1 AWS A5.18 ER70S-6	590	500	26	-40°C – 80j	0,07	1,7	0,95	<0,15	<0,05	<0,15	<0,02	<0,03	<0,15	<0,1	-	0,9 – 1,6 mm		
SAW1	Suitable for structural unalloyed steels, mechanical properties Rm ~ 480 N/mm², influenced by the kind of flux used. Naval sector, bodywork, thin metal plates and pipes, lighth structural work,, tanks, etc.	SAW1	EN ISO 14171-A- S1 AWS A5.17 EL12	-	-	-	-	0,07	0,5	<0,1	<0,15	<0,15	<0,15	-	-	-	<0,25	-	1,4 – 5,0 mm		
SAW2	Suitable for structural unalloyed steels, mechanical properties Rm ~ 480 N/mm², influenced by the kind of flux used. Naval sector, bodywork, thin metal plates and pipes, lighth structural work,, tanks, etc.	SAW2	EN ISO 14171-A- S2 AWS A5.17 EM12	-	-	-	-	0,08	1,0	<0,1	<0,15	<0,15	<0,15	-	-	-	<0,25	-	1,4 – 5,0 mm		
SAW2Si	Suitable for unalloyed steels. Basically used in the building sector. Constructions such as light structural work, boilers, tanks, building up of pipes, naval sector, etc. Mechanical characteristics conditioned by the kind of flux used.	SAW2Si	EN ISO 14171-A- S2Si AWS A5.17 EM12K	-	-	-	-	0,1	1,0	0,2	<0,15	<0,15	<0,15	-	-	-	<0,25	-	1,4 – 5,0 mm		
SAW3Si	Copper coating welding wire with good value of Mn. It can be used on submerged arc welding of structural steels with medium strength.	SAW3Si	ISO 14343-A: G 19 12 3 LSi AWS A 5.9: ER316LSi	-	-	-	-	0,08	1,0	<0,1	<0,15	<0,15	<0,15	-	-	-	<0,25	-	1,4 – 5,0 mm		

SOLID LOW ALLOYED WIRES



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
SG2Ti	Micro-alloyed steel, triple de-oxidized with Ti, Al, Zr suitable for the welding of C-Mn steels and low-alloy steels on greasy, oxidized surfaces destined to sub-sequent coating process also galvanic, with tensile strength ~ 580 N/mm². Good also at low temperature. Tanks, containers, car industry, structural work, household appliances, pipelines, boilers, naval sector, petrochemical sector, etc.	SG2Ti MAG SG2Ti TIG	EN ISO 14341-A- G 42 3 M21 2Ti AWS A5.18 ER70S-2 EN ISO 636-A- W 2Ti	560	480	24	-20°C – 50j	0,06	1,2	0,6	<0,1	<0,05	<0,1	0,1	<0,03	0,08 + Zr 0,07	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm		

SOLID LOW ALLOYED WIRES



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
Corten	Excellent resistance to atmospherical agents thanks to the presence of Cu, Cr, Ni.Suitable for bridges, crances, ground moving machines, boilers, building structures, petrolchemical sector, fans, gas pipes, fume suction, etc.	Corten MAG Corten TIG Corten SAW	EN ISO 14341-A- G 50 4 C1/M21 Z3Ni1 AWS A5.28 ER80S-G EN ISO 636-A- W Z3Ni1 EN ISO 14171-A- S2Ni1Cu AWS A5.23 EG	630	550	22	-40°C – 60j	0,08	1,4	0,8	0,25	<0,05	0,8	<0,02	<0,03	+Zr <0,15	<0,4	-	0,6 – 1,6 mm 1,0 – 4,0 mm 1,4 – 4,0 mm		
SG 100	NiCrMo fine-grained steels for low temperature applications. Used in the industrial sectors of means of transport and ground movement, building industry, bridges, tanks, railway transport, mining industry, shipbuilding etc.	SG 100 MAG SG 100 TIG	EN ISO 16834-A- G 55 5 M21 Mn3NiCrMo AWS A5.28 ER100S-G	730	640	20	-50°C – 50j	0,08	1,4	0,75	0,55	0,25	0,6	<0,02	-	<0,05 +Zr <0,05	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm		
SG 110	Copper coated low-alloy wire with Ni-CrMo suitable for single pass or multipass welding of low-alloy steels. It can be used also when good toughness characteristics in low temperature are requide.	SG 110 MAG SG 110 TIG	EN ISO 16834-A- G 69 4 M21 Mn3Ni1CrMo AWS A5.28 ER110S-G	800	750	19	-40°C – 70j	0,08	1,6	0,6	0,3	0,3	1,5	<0,03	0,1	<0,05 +Zr <0,05	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm		
SG 120	Fine-grained middle-alloyed steels with high yield st- rength and austempering steels. Lifting and handling machines, bridges, tanks, transport, shipbuilding, railway sector, mining industry, tank lorries, bridges, frames, etc.	SG 120 MAG SG 120 TIG	AWS A5.28 ER120S-1	880	800	19	-50°C – 90j	0,08	1,7	0,55	0,4	0,5	2,5	<0,05	<0,03	<0,03 +Zr <0,03	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm		
T62	NiCrMo fine-grained steels for low temperature app- lications. Used in the industrial sectors of means of transport and ground movement, building industry, bridges, tanks, railway transport, mining industry, shipbuilding etc.	T62 MAG T62 TIG	EN ISO 16834-A- G 62 4 M21 Mn3NiCrMo AWS A5.28 ER100S-G	750	650	20	-40°C – 60j	0,09	1,7	0,7	0,5	0,2	0,6	<0,02	-	<0,05 +Zr <0,05	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm		
T85	Ni-Cr-Mo fine-grained and high yield strength. Lifting and handling machines, building industry, transport, naval, railway sector, mining industry, petrolchemical industry, etc.	T85 MAG T85 TIG	EN ISO 16834-A- G 89 4 M21 Mn4Ni1,5CrMo AWS A5.28 ER110S-G	940	860	18	-40°C – 40j	0,1	1,8	0,75	0,35	0,5	1,9	<0,01	<0,03	<0,05 +Zr <0,05	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm		
T90	NiCrMo alloyed steel, fine-grained and yeld strength. Lifting and handling machines, building industry, transport, naval, railway sector, mining industry, petrolchemical industry, etc.	T90 MAG T90 TIG	EN ISO 16834-A- G 89 4 M21 Mn4Ni2CrMo AWS A5.28 ER110S-G	960	890	18	-40°C – 60j	0,1	1,8	0,85	0,5	0,5	2,1	<0,01	<0,03	<0,01 +Zr <0,01	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm		
T96	NiCrMo alloyed steel, fine-grained and yeld strength. Lifting and handling machines, building industry, transport, naval, railway sector, mining industry, petrolchemical industry, etc.	T96 MAG T96 TIG	EN ISO 16834-A- G 89 4 M21 Mn4Ni2,5CrMo AWS A5.28 ER120S-G	1040	960	16	-40°C – 60j	0,11	1,9	0,7	0,5	0,5	2,5	<0,01	<0,03	<0,08 +Zr <0,05	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm		
Ni1	Fine-grained low alloy steels and also austempe- ring steels. Building up of cranes, transport, tanks, industrial facilities, equipment in general, pipelines, shipbuilding, etc.	Ni1 MAG Ni1 TIG	EN ISO 14341-A- G3Ni1 AWS A5.28 ER80S-Ni1 EN ISO 636-A- W 3Ni1	600	480	26	-50°C – 100j	0,09	1,2	0,7	<0,15	<0,15	1,0	<0,02	<0,03	+Zr <0,05	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm		
Ni25	Applications up to -60° C on mild steels, low alloy steels and fine grained steels. Plates, storage tanks, pipelines and equipment for cryogenic use.	Ni25 MAG Ni25 TIG Ni25 SAW	EN ISO 14341-A- G 50 9 M23 2Ni2 AWS A5.28 ER80S-Ni2 EN ISO 636-A- W 2Ni2 AWS A5.23 E Ni 2 EN 14171-A- S2Ni2	630	530	26	-60°C – 100j	0,08	1,1	0,5	<0,15	<0,15	2,5	<0,02	<0,03	+Zr <0,05	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm 1,4 – 4,0 mm		

SOLID LOW ALLOYED WIRES

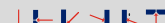
PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
NiMo1	Fine-grained low alloy steels and also austempering steels. Building up of cranes, transport, tanks, industrial facilities, equipment in general, pipelines, shipbuilding, etc.	NiMo1 MAG NiMo TIG NiMo SAW	EN ISO 14341-A- ~ G Z3Ni1 AWS A5.28 ER80S-Ni1 EN ISO 636-A- ~ W Z3Ni1 AWS A5.23 ENi6 EN ISO 14171-A- S3Ni1Mo0,2	620	500	25	-50°C – 100j	0,1	1,2	0,7	<0,15	0,2	1,0	<0,02	<0,02	+Zr <0,05	<0,25	-	0,6 – 1,6 mm 1,0 – 4,0 mm 1,4 – 4,0 mm		

PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
713	Seamless micro-alloy rutile flux-cored wire with rapidly solidifying slag for CO2 and Ar-CO2 mix. The wire is all-positional and runs with a very stable, soft arc producing excellent weld bead shape and finish with negligible spatter. The slag is easily detachable and fume emission is very low. Ease of use and high productivity, in combination with good mechanical properties and a weld metal hydrogen content less than 4 ml / 100 g, make 713 an extremely versatile general purpose cored wire. Applications: ship-building, steel and vessel construction, mechanical engineering and pipe work.	FCW	EN ISO 17632-A: T 46 4 P M21/C1 1 H5 AWS A5.20: E71T-1M(C)-J H4 AWS A5.36: E71T1-M21A4-CS1-H4	600	530	26	-40°C – 70j -20°C – 100j	0,05	1,3	0,5	-	-	-	-	-	-	-	-	1,0 - 2,0 mm		
716	Seamless rutile flux cored wire with excellent welding properties combined with extreme impact toughness down to -60 °C. Fast freezing slag for economic welding in PF position up to 280 A without any spatters. Due to the seamless production process this wire is strongly recommended for automated welding such as with robots. Due to the seamless production process the hydrogen content is below 3 ml / 100 g weld metal even after long storage. CTOD tested. Applications: steel construction, shipbuilding, pressure vessels, mechanical engineering, pipe work, offshore, crane building, heavy transport, etc.	FCW	EN ISO 17632-A: T 46 6 P M21 1 H5 AWS A5.20: E71T-9M-J H4 AWS A5.36: E71T1-M21A8-CS1-H4	600	530	27	-60°C – 70j -40°C – 100j	0,05	1,3	0,5	-	-	0,4	-	-	-	-	-	1,0 - 1,6 mm		
710	Seamless metal cored wire with remarkable stable arc and no spatters. Excellent for use in automated welding applications such as orbital Mag or robotic welding. 710 can also be used for constructions that needs post weld heat treatment after welding and still offers technical properties confirming 5Y46 class. Due to the seamless production process the hydrogen content is below 3 ml / 100 g weld metal even after long storage in unconditioned areas. Applications: steel construction, shipbuilding, pressure vessels, mechanical engineering, pipe work, offshore, crane building, heavy transport, lifting equipment, etc.	MCW	EN ISO 17632-A: T 46 6 M M21 1 H5 AWS A5.18: E70C-6M H4 AWS A5.36: E81T15-M21A8-CS1-H4	600	530	28	-60°C – 100j -40°C – 140j	0,05	1,5	0,7	-	-	-	-	-	-	-	-	1,0 - 1,6 mm		
821	Seamless micro-alloy rutile flux-cored wire with rapidly solidifying slag for Ar-CO2 mix. The wire has excellent weld puddle manipulation, superior out-of-position weldability. Low diffusible hydrogen, excellent fracture toughness down to -60 °C and CTOD test at -20°C makes this wire particularly suitable for critical applications in the pipeline and offshore industries. Idoneos when PWHT is required. 821 provides low spatter loss and an easy slag removal. Applications: specialized shipbuilding, offshore steel structures, pipelines, steel and vessel construction, pipe work.	FCW	EN ISO 17632-A: T 50 6 1Ni P M21 1 H5 AWS A5.29: E81T1-Ni1M-J H4 AWS A5.36: E81T1-M21A8-Ni1-H4	620	550	26	-60°C – 80j -40°C – 110j	0,05	1,3	0,5	-	-	0,9	-	-	-	-	-	1,0 - 1,6 mm		
781	Seamless rutile flux-cored wire which deposits 1%Ni/0,5%Cu weld metal designed for weather-resisting steels like Corten. Excellent impact toughness properties down to -40°C. Applications: Weathering steels , Steel Structure, General Fabrication, Offshore etc.	FCW	EN ISO 17632-A: T 46 4 Z P M21 1 H5 AWS A5.29: E81T1-G H4 AWS A5.36: E81T1-M21A4-G-H4	620	570	24	-20°C – 110j -40°C – 80j	0,05	1,3	0,5	-	-	1,0	-	-	-	0,5	-	1,2 mm		
281	Seamless metalcored wire which deposits 1%Ni/0,5%Cu weld metal designed for weather-resisting steels like Corten. Excellent impact toughness properties down to -40°C. No slag coverage. Applications: Weathering steels , Steel Structure, General Fabrication, Offshore etc.	MCW	EN ISO 17632-A: T 46 4 Z M M 1 H5 AWS 5.18: E80C-W2 H4	550-680	>460	22	-20°C – 60j -40°C – 47j	0,05	1,5	0,7	-	-	1,1	-	-	-	0,5	-	1,2 mm		

CORED WIRES



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
550	Seamless all-position gas-shielded flux-cored wire that provides excellent mechanical properties with CO2 and Ar-CO2 mix. Excellent all-position welding with higher currents. For use down to -60 °C. Particularly suitable for orbital welding and for weldings on ceramics in all positions. Low fumes and spatter loss, and remarkable easy slag removal. Applications: Pipelines, Offshore, shipbuilding, steel structures, pressure vessels, heavy equipment.	FCW	EN ISO 18276-A: T 55 6 Mn1,5Ni P M21 1 H5 AWS A5.29: E91T1-K2M(C)-J H4 AWS A5.36: E91T1-M21A8-K2-H4	700	620	24	-40°C – 120j -60°C – 90j	0,08	1,5	0,5	-	<0,2	1,5	-	-	-	-	-	-	1,2 mm	
240	Seamless metal cored wire designed for welding low alloy steels with around a 1% Ni deposit and applications where low temperature toughness down to -60 °C is required. The low level of diffusible hydrogen typiccally below 3 ml / 100 g weld metal minimizes the risk of hydrogen-induced cracking. CTOD tested at -20 °C. Can also be used in some weathering steel applications where color match is not critical. Applications: automatic and mechanized welding, Heavy equipment, Shipbuilding, Structural and Bridge Fabrication, Pressure Vessels etc.	MCW	EN ISO 17632-A: T 50 6 1Ni M M21 1 H5 AWS A5.28: E80C-Ni1 H4 AWS A5.36: E81T15-M21A8-Ni1-H4	620	550	27	-40°C – 120j -60°C – 90j	0,05	1,3	0,7	-	-	0,9	-	-	-	-	-	-	1,0 - 1,2 mm	
690	Seamless micro-alloyed rutile flux-cored wire for high strength steels. This is the first seamless rutile FCW with extreme low hydrogen for S690. It is excellent for use in positional welding where high deposition rate is required, suitable for temperatures down to -60°C. Excellent for use with ceramic backing and orbital welding in all positions. Extreme low spatter properties and excellent arc stability with fats freezing slag. Applications: High-strength low alloy steels, quenched and tempered steels, Offshore structures, Heavy equipment, Crane building, lifting platforms, Single and multi-pass welding	FCW	EN ISO 18276-A: T 69 6 Z P M21 1 H5 AWS A5.36: E111T1-M21A4-G-H4	820	750	18	-20°C – 110j -40°C – 80j -60°C – 55j	0,08	1,7	0,5	-	0,15	2,0	-	-	-	-	-	-	1,2 mm	
742	742 is a high performance metal cored wire for high strength steels with SMYS exceeding 690MPa. Suitable for robot applications automatic root welding without backing possible. The low diffusible hydrogen levels and the excellent values of impact properties down to -60°C makes this wire ideal for application in extreme climatic conditions. Applications: HSLA steels, Specialized Shipbuilding, Heavy equipment, Offshore etc.	MCW	EN ISO 18276-A: T 69 6 Mn2NiCrMo M M21 1 H AWS A5.28: E110C-K4 H4 AWS A5.36: E111T15-M21A8-K4-H4	820	750	20	-40°C – 120j -60°C – 90j	0,05	1,6	0,4	0,5	0,5	2,2	-	-	-	-	-	-	1,2 - 1,6 mm	
940	Gas shielded metal cored wire extremely low diffusible hydrogen weld deposit. Ideal for use of short arc and spray arc. High deposition rate and efficiencies. Smooth arc characteristic. BWB-WIWEB Approval and CTOD tested –40 °C Applications: Offshore structures, Pipelines, Non-alloy and fine grain steels, Vessels, General fabrication, Heavy equipment, Single and multi-pass welding	MCW	EN ISO 18276-A: T 55 6 Mn2,5Ni M M21 1 H5 AWS A5.36: E91T15-M21A8-K7-H4	690	600	23	-40°C – 120j -60°C – 100j	0,05	1,4	0,6	-	-	2,2	-	-	-	-	-	-	1,2 mm	
1100	1100 is a high performance metal cored wire for high strength steels with SMYS exceeding 800 MPa, such as ASTM 514, HY-100 and T1 steels. Diffusible hydrogen levels will be less than 4ml/100g of deposited weld metal giving it more resistance to cracking. Suitable for robot applications and ideal for use in short and spray arc. Excellent impact toughness properties down to -40°C. Can be used out of position with pulse-capable welding. Applications: HSLA steels , Heavy equipment, Offshore, Pressure Vessels.	MCW	EN ISO 18276-A: T 89 4 Mn2NiCrMo M M21 1 AWS A5.28: E120C-K4 H4 AWS A5.36: E131T15-M21A4-K4-H4	1050	1000	17	-20°C – 80j -40°C – 60j	0,07	1,5	0,5	0,6	0,6	2,6	-	-	-	-	-	-	1,2 mm	

PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
825	825 is a micro-alloy rutile flux-cored wire with rapidly solidifying slag for Ar-CO2 mix. Excellent weld puddle manipulation, superior out-of-position welding. Idoneus for mechanized welding and all-position welding on ceramic backing. Applications: Vessel and steel construction, Mo-steels up to 500 °C (932 °F), mechanical engineering and pipe work.	FCW	EN ISO 17634: T MoL P M 1 H5 AWS A5.29: E81T1-A1M H4 AWS A5.36: E81T1-M21PY-A1-H4	600	520	23	+20°C – 80j	0,07	1,1	0,5	-	0,5	-	-	-	-	-	-	1,2 mm		
235	Metal-cored seamless wire which deposits a 0.5% Mo type weld metal. It is primarily intended for similar composition steels, used where creep rupture strenght and ductility operating at service temperatures up to 500°C are required. Wire suitablealso for ordinary C-Mn steels when higher tensile strenght is required.	MCW	EN ISO 17634-A: T Mo M M21 1 H5 AWS A5.28: E80C-G H4 AWS A5.36: E81T15-M21P4-A1-H4	600	520	26	-40°C – 100j -20°C – 120j	0,07	1,1	0,7	-	0,5	-	-	-	-	-	-	1,0 - 1,6 mm		
236	236 is a metal-cored seamless wire which deposits a 1.25%Cr/0.5% Mo type weld metal. It is primarily intended for creep resisting steels of similar composition used in power generation plant operating at service temperatures up to 550 °C. Wire suitable also for use in the chemical and petrochemical industries where resistance to hydrogen attack and stress corrosion cracking in sour enviroments are required.	MCW	EN ISO 17634-A: T CrMo1 M M21 1 H5 AWS A5.28: E80C-B2 H4 AWS A5.36: E81T15-M21P4-B2-H4	620	540	24	+20°C – 110j -40°C – 35j	0,05	1,0	0,3	1,1	0,5	-	-	-	-	-	-	1,2 mm		
237	237 is a metal-cored seamless wire which deposits a 2.25%Cr/ 1.0% Mo type weld metal. It is primarily intended for creep resisting steels of similar composition used in steam generation. Wire suitable also for use in the chemical and petrochemical industries where resistance to hydrogen attack and stress corrosion cracking in sour enviroments are required.	MCW	EN ISO 17634-A: T CrMo2 M M21 1 H5 AWS A5.28: E90C-B3 H4 AWS A5.36: E91T15-M21P0-B3-H4	650	560	22	+20°C – 130j -20°C – 90j	0,07	1,0	0,3	2,3	1,1	-	-	-	-	-	-	1,2 mm		
71-T1	Open-arc flux cored wire (self-shielded) designed for welding thin carbon and carbon-manganese steels in all positions. Easily removable slag, versatility and manuality; suitable for welding zinc-coated plates as well. Completely free of barium salts. Applications include tanks, boilers, steel structural works (large thickness), earthworks and construction works. To be used on DC- (DC operation, electrode negative polarity).	OA	EN ISO 17632-A: T 42 Z WN 1 H15 AWS A 5.20: E71T-11	560	450	23	-	0,17	0,9	0,38	-	-	-	1,4	-	-	-	-	0,9 – 1,6 mm		



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
6013 E	Universal all position mild steel electrode to weld in all positions, including vertical down. Good operability, easy striking, strong arc with low spatters, good penetration and easy slag removal. Suitable for current supplies with low open arc voltage.	6013 E	ISO 2560-A E 42 0 RC 11 AWS A5.1 E6013	520	450	26	+20°C – 90j -10°C – 50j	0,1	0,45	0,4	-	-	-	-	-	-	-	-	1,6 – 5,0 mm		
48 E	Basic coated electrode for low- and unalloyed steel. Low hydrogen content with high mechanical properties. Root passes can be welded with DC-. Suitable for welding steel constructions, machine constructions, ships, containers, tanks, high strenght pipe constructions etc.	48 E	EN ISO 2560-A: E 42 5 B 42 H5 AWS A5.1: E 7018- H4R	560	480	37	-40°C – 80j -50°C – 60j	0,05	1,4	0,5	<0,1	-	<0,2	-	-	-	-	-	2,0 - 5,0 mm		
48 EVD	Basic all-positional AC/DC electrode for unalloyed and low alloyed steel. Especially made for pipe welding. Extremely stable arc which enables it to be manipulated in the most difficult welding positions.	48 EVD	EN ISO 2560-A: E 46 2 B 12 H5 AWS A5.1: E 7018-H8	620	530	25	-20°C – 80j -30°C – 70j	0,06	1,2	0,6	<0,1	-	<0,2	-	-	-	-	-	2,0 – 4,0 mm		
7016 E	Rutile-basic double coated electrode with low hydrogen and outstanding welding characteristics. Stable arc in all positions that makes it optimal for root passes. Universal use for all construction steels and repairs.	7016 E	EN ISO 2560-A: E 38 3 B 12 H10 AWS A 5.1: E7016	550	450	27	-20°C – 80j -50°C – 70j	0,1	0,9	0,7	-	-	-	-	-	-	-	-	2,0 – 5,0 mm		
7016 E Vacuum	Rutile-basic double coated electrode with low hydrogen and outstanding welding characteristics. Stable arc in all positions that makes it optimal for root passes. Universal use for all construction steels and repairs.	7016 E Vacuum	EN ISO 2560-A: E 42 4 B 12 H10 AWS A 5.1: E7016	550	450	27	+20°C – 80j -40°C – 0j	0,1	0,9	0,7	-	-	-	-	-	-	-	-	2,5 – 4,0 mm		
7024 E	High recovery rutile electrode (180%) with high deposition rate for mild steels. It is suitable for high speed fillet welding in downhand and horizontal position and downhand butt welding. Very nice bead appearance and self loosening slag.	7024 E	EN ISO 2560-A: E 38 0 RR 5 3 AWS A5.1 E7024	550	>420	22	+20°C – 70j	0,1	1,0	0,6	-	-	-	-	-	-	-	-	2,5 - 5,0 mm		
7027 E	High recovery rutile-acid electrode with 150% recovery for horizontal and horizontal-vertical fillets, lap and butt joins in mild steels. Electrode runs with a very fast smooth stable arc, leaving a finely rippled bead surface with self-detaching porous slag and minimum spatter. Electrode is also suitable for primer-treated materials.	7027 E	EN ISO 2560-A: E 42 4 RA 53 AWS A5.1: E 7027	550	>420	22	+20°C – 85j -40°C – 47j	0,07	1,0	0,3	-	-	-	-	-	-	-	-	2,0 – 6,0 mm		
7028 E	High recovery basic electrode (180%). Suitable for high productivity welding of steels with tensile strength up to 610 N/mm2 and finegrained steels.	7028 E	ISO 2560-A: E 42 2 B 83 AWS A5.1: E 7028	>500	>450	24	+20°C – 160j -40°C – 80j	0,1	1,2	0,4	-	-	-	-	-	-	-	-	3,2 – 4,0 mm		
Corten E	Low hydrogen basic coated electrode with a steel deposit containing Cu, Ni, Cr for welding all steels resistant to atmospheric corrosion. Regular fusion, good slag removal and nice bead appearance. Applications include public buildings, tanks, bridges.	Corten E	ISO 2560-A: E 46 2 Z 42 26 H5 AWS A5.1: E 8018-W2	550	460	19	-20°C – 60j	0,1	1,0	0,4	0,5	-	0,5	-	-	-	0,4	-	2,5 – 4,0 mm		
SGMo E	Low hydrogen basic coated electrode with Mo for welding creep resistant steels used at high temperatures up to 500°C. Good resistance to hydrogen attacks(chemical installations). Soft fusion, easy slag removal and nice bead aspect. Used for piping systems and boilers etc.	SGMo E	EN ISO 3580-A: E Mo B 42 H5 AWS A5.5: E7018-A1	550	450	22	+20°C – 100j	0,1	0,8	0,4	-	0,5	-	-	-	-	-	-	2,5 – 5,0 mm		

PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	N	CU	NB			
CrMo1 E	Low hydrogen basic coated electrode alloyed with Cr and Mo for welding creep resistant steels with 1% Cr - 0,5% Mo. Resistant to temperature up to 500-550°C . For piping systems, boilers, overheaters in petrochemical and chemical industry.	CrMo1 E	EN ISO 3580-A: E CrMo1 B 42 H5 AWS A5.5: E8018-B2	550	460	19	+20°C – 120j	0,12	0,8	0,4	1,1	0,5	-	-	-	-	-	-	2,5 - 5,0 mm		
CrMo2 E	Low hydrogen basic coated electrode alloyed with Cr and Mo for welding creep resistant steels with 2% Cr - 1,0% Mo. Resistant to temperature up to 600°C . For piping systems, boilers, overheaters, valve bodies, hydrocrackers.	CrMo2 E	EN ISO 3580-A: E CrMo2 B 42 H5 AWS A5.5: E9018-B3	570	450	17	+20°C – 100j	0,07	0,8	0,4	2,25	1,0	-	-	-	-	-	-	2,5 - 5,0 mm		
CrMo5 E	Low hydrogen basic coated electrode alloyed with Cr and Mo for welding steels with similar composition. Resistant to temperature up to 600°C . Highly resistant to gas and overheated steam. For piping systems, boilers, overheaters.	CrMo5 E	EN ISO 3580-A: E CrMo5 B 42 H5 AWS A5.5: E8018-B6	590	420	20	+20°C – 70j	0,1	0,8	0,4	5,0	0,5	-	-	-	-	-	-	2,5 - 5,0 mm		
CrMo9 E	Low hydrogen basic coated electrode alloyed with Cr and Mo for welding steels with similar composition. Resistant to temperature up to 600°C . Highly resistant to gas and overheated steam. For piping systems, boilers, power plants, heat exchangers.	CrMo9 E	EN ISO 3580-A: E CrMo9 B 42 H5 AWS A5.5: E8016-B8	650	500	19	+20°C – 60j	0,1	0,8	0,4	9,0	1,0	-	-	-	-	-	-	2,5 - 5,0 mm		
CrMo91 E	Low hydrogen basic coated electrode alloyed with Cr and Mo for welding steels with similar composition. Resistant to temperature up to 600°C . Highly resistant to gas and overheated steam. For piping systems, boilers, power plants, heat exchangers.	CrMo91 E	EN ISO 3580-A: E CrMo91 B 42 H5 AWS A5.5: E9015-B9	750	630	18	+20°C – 60j	0,1	0,7	0,25	9,0	1,0	0,7	-	0,2	0,05	0,04	0,05	2,5 - 5,0 mm		
8018-C1	Low hydrogen basic coated electrode alloyed with Nickel for welding cold tough fine grain steels applied at low temperature -60°C. Frequently used for liquid gas distribution pipes, tanks, off shore and petrochemistry.	8018-C1	EN ISO 2560-A: E 46 6 2Ni B 42 H5 AWS A5.5: E8018-C1	550	460	19	-40°C – 70j -73°C – 27j	0,12	1,0	0,4	-	-	2,5	-	-	-	-	-	2,5 - 5,0 mm		
8018-C2	Low hydrogen basic coated electrode alloyed with Nickel for welding cold tough fine grain steels applied at low temperature -60°C. Frequently used for liquid gas distribution pipes, tanks, off shore and petrochemistry.	8018-C2	EN ISO 2560-A: E CrMo91 B 42 H5 AWS A5.5: E9015-B9	550	460	19	-73°C – 80j -100°C –30j	0,1	0,9	0,3	-	-	3,5	-	-	-	-	-	2,5 - 5,0 mm		
8018-C3	Low hydrogen basic coated electrode alloyed with Nickel for welding steels with high strenght and high toughness, resistant to low temperature down to -60°C.	8018-C3	EN ISO 2560-A: E 46 5 1Ni B 42 H5 AWS A5.5: E8018-C3	550	470	24	-40°C – 70j	0,12	1,1	0,5	-	-	1,0	-	-	-	-	-	2,5 - 5,0 mm		
9018-G	Low hydrogen basic coated electrode with a deposit which has a high yield strenght and is very tough. Particularly recommended for root passes on fine grain steels resistant to a tensile strenght between 550 and 700 MPa.	9018-G	AWS A5.5: E9018-G EN 757: E 55 5 1NiMo B 42 H5	620	530	20	+20°C – 150j -60°C –28j	0,1	1,2	0,5	0,1	0,3	0,8	-	-	-	-	-	2,5 - 5,0 mm		
9018-D1	Low hydrogen basic coated electrode with high yield strenght for welding fine grain steels applied at temperatures between -50 to +500°C. Thermal treated low alloyed steels with C-Mn. Main purpose is joining of rail and high strenght applications.	9018-D1	AWS A5.5: E9018-D1 EN 757: E 55 4 MnMo B 42 H5	630-710	540-600	18	+20°C – 150j -40°C – 50j -50°C – 30j	0,1	1,5	0,5	-	0,4	-	-	-	-	-	-	2,5 - 5,0 mm		

PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
10018 E	Basic coated electrode highly resistant to cracks and developed for welding fine grain steels and steels with high mechanical strenght(Rm up to 800Mpa). Welds of high security and high strenght steels.	10018 E	AWS A5.5: E10018-G EN 757: E 62 5 1,5NiMo B 42 H5	720-820	620	22	+20°C – 130j -20°C – 90j -50°C – 50j	0,1	1,4	0,5	0,2	0,4	1,5	-	-	-	-	-	2,5 - 5,0 mm		
11018 E	Basic electrode with a deposit which is very resistant to cracks and has a high strenght. The deposit contains Ni, Cr, Mo, Mn for welding similar fine grained steels. Welds of high security and high strenght steels.	11018 E	AWS A5.5: E11018-M EN 757: E 69 4 Mn 2NiCrMo B 42 H5	760	690	20	+20°C – 120j -40°C – 60j	0,1	1,5	0,4	0,4	0,5	2,1	-	-	-	-	-	2,5 - 5,0 mm		
DCS	Electrode for bevelling and gouging of all metals, including stainless steel, cast iron and copper alloys. Strong blowing charesterictic to remove metal with high efficiency, smooth and uniform cut. Used for elimination of screws, rivets, welding beads, bevelling on foundry defects or hardfacing deposits before welding etc.	DCS	-																2,5 - 5,0 mm		
CUT 100	Electrode for cutting, bevelling and piercing of all metals, including stainless steel, cast iron and copper alloys. Smooth and uniform cut. Used for cutting of steel, piercing of holes, elimination of screws etc.	Cut 100	-																3,2 - 4,0 mm		



OXY-ACETYLENE GAS RODS



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
G2 (H44)	Uncoppered gas welding rod for oxy-acetylene welding. Used on C-Mn unalloyed steels. Constructions and ligh structural work, boilers, tanks, building up of pipes, naval sector, car industry, not-carrying building structures, etc.	G2 (H44)	EN ISO 20378 O II AWS A5.2 R60 DIN 8554: GII 21	450	330	20	-20°C – 50j	0,1	1,1	0,15	-	-	-	-	-	-	-	-	1,6– 4,0mm		
G4S (H44Mo)	Uncoppered gas welding rod for oxy-acetylene welding. Used for the welding of middle-low alloy steels. Welding of pipes, tanks, pressure boilers, heavy structural work, building of pipes, shipbuilding sector, etc.	G4S (H44Mo)	DIN 8554: GIV 22	630	440	37	+20°C – 120j	0,1	1,1	0,15	-	0,5	-	-	-	-	-	-	1,6 – 4,0mm		
G4	Copper coated gas welding rod for oxy-acetylen welding. Used for the welding of middle-low alloy steels. Welding of pipes, tanks, pressure boilers, heavy structural work, building of pipes, shipbuilding sector, etc.	G4	EN ISO 20378 O IV AWS A5.2 R60-G DIN 8554: GIV 22	500	340	25	-20°C – 50j	0,1	1,1	0,1	-	-	-	-	-	-	-	-	1,0 – 4,0mm		
G5	Copper coated gas welding rod for oxy-acetylen welding. Suitable for Cr-Mo heat resistant steels. Used on boilers, tanks, reserviors, pipelines, shipbuilding sector and industrial plants in general.	G5	EN ISO 20378 O V	530	350	21	+20°C – 80j	0,12	1,0	0,2	1,0	0,5	-	-	-	-	<0.3	-	1,0 – 4,0mm		
CASTIRON	Welding rod for oxy- acetylene hot welding of grey cast iron. The deposit shows the same colour and structure as grey cast iron. Mainly used to weld defects in foundries. Hardness 185 HB after welding. Used together with Meltolit GJ Flux.	CASTIRON	DIN 8573: G FeC-1 ISO 1071: R C FeC-1	-	-	-	-	3,3	0,5	3,2	-	-	0,5	-	-	-	0,1	-	4,0 – 10,0 mm		
110F	Flux coated Welding rod for oxy- acetylene hot welding of grey cast iron. The deposit shows the same colour and structure as grey cast iron. Mainly used to weld defects in foundries. Hardness 185 HB after welding.	110F	DIN 8573: G FeC-1 ISO 1071: R C FeC-1	-	-	-	-	3,3	0,5	3,2	-	-	0,5	-	-	-	0,1	-	5,0 mm		

STAINLESS STEEL ALLOYS



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
307	For difficult welded steels and stainless steels against regular steels. Joining and hardsurfacing parts, buffer layers before hardfacing to avoid cracks and welding tool steels, manganese steels etc.	307 XM/	ISO 14343-A: 18 8 Mn AWS A 5.9: ER 307Si	650	460	40	+20°C – 140j	0,09	7,0	0,9	18,5	-	9,0	-	-	-	-	-	0,6 – 1,6 mm		
		307 XT	"																1,0 – 4,0 mm		
		307 E	ISO 3581-A: E 18 8 Mn R 7 3 X AWS A 5.4: E307-26	600-	>400	>30	+20°C – >70j	0,1	5,0	0,8	18	-	8,5	-	-	-	-	-	2,0 – 5,0 mm		
		307 SAW	ISO 14343-A: 18 8 Mn AWS A 5.9: ER 307	750				0,09	7,0	0,9	18,5	-	9,0	-	-	-	-	-	1,6 – 4,0 mm		
		707 FCW	ISO 17633-A: T 18 8 Mn R M2/C11 3 AWS A5.9 E307 T0-1/4		480	40	+20°C – 50j	0,1	6,0	0,9	19,5	-	9,5	-	-	-	-	-	1,0 - 2,4 mm		
		707 FCW-PW	ISO 17633-A: T 18 8 Mn P M21/C1 1 AWS A5.9 E307 T1-1/4	630	410	30	+20°C – 60j	0,09	6,0	0,9	19,0	-	9,5	-	-	-	-	-	1,2 mm		
		707 MCW	ISO 17633-A: T 18 8 Mn M M12 1 AWS A5.9 EC307	600	450	40	+20°C – 70j	0,09	6,0	0,9	19,5	-	8,5	-	-	-	-	-	1,2 - 1,6 mm		
308L	Suitable for welding stainless steels with an alloy content between 16 to 21% Cr and 8 to 13% Ni, type 304L, stabilised or not. Service temperatures are typically -196°C to about 400°C.	308L XM/	EN ISO 14343-A: S 19 9 L AWS A5.9: ER308L	630	370	36	+20°C – 120j	0,02	1,8	0,4	20,0	-	10,0	-	-	-	-	-	0,6 – 1,6 mm		
		308L XT	"				- 60°C – 90j												1,0 – 4,0 mm		
		308L SAW	"																1,6 – 4,0 mm		
308LSi	Suitable for welding stainless steels with an alloy content between 16 to 21% Cr and 8 to 13% Ni, type 304L, stabilised or not. Service temperatures are typically -196°C to about 400°C. Higher Si content gives better weld metal flow and improves bead appearance.	308LSi XM	ISO 14343-A: 19 9 LSi AWS A5.9: ER308LSi	630	440	37	+20°C – 120j	0,02	1,8	0,8	20	-	10,0	-	-	-	-	-	0,6 – 1,6 mm		
		308LSi XT	"																1,0 - 4,0 mm		
		308L E	ISO 3581-A: E 19 9 L R 32 AWS A5.4: E308L-16	540	360	35	+20°C – 70j	0,03	0,7	0,8	19,0		9,5						2,0 – 5,0 mm		
		308L FCW	ISO 17633-A: T 19 9 L R M21/C1 3 AWS A 5.22:E308LT0-1/4	560	400	40	-196°C – 32j	0,03	1,4	0,7	19,5		10,5						1,0 - 1,6 mm		
		308L FCW-PW	ISO 17633-A: T 19 9 L P M21/C1 1 AWS A 5.22:E308LT1-1/4	620	460	40	-196°C – 35j	0,03	1,4	0,7	20,0		10,5						1,0 - 1,2 mm		
		308L MCW	ISO 17633-A: T 19 9 L M M12 1 AWS A 5.22:EC308L	600	430	40	-196°C – 35j	0,02	1,4	0,55	20,5		10,5						1,2 - 1,6 mm		
308H	Suitable for welding stainless steels with similar composition like 304H, 321H, 347H. Includes a higher carbon between 0,04 and 0,08 for increased temperature resistance up to 750°C.	308H XM	ISO 14343-A: 19 9 H AWS A5.9: ER308/308H	600	400	35	+20°C – 80j	0,06	1,8	0,44	19,9	-	9,7	-	-	-	-	-	0,6 – 1,6 mm		
		308H XT	"																1,0 - 4,0 mm		
		308H E	ISO 3581-A: S 19 9 H B 42 AWS A5.4 E308H-15	>560	>380	35	+20°C – 80j	0,05	1,8	0,4	19,5		9,5						2,5 – 4,0 mm		
		308H FCW	ISO 17633-A:T Z 19 9 H R M21/C1 3 AWS A5.22: E308HT0-1/4	620	470	40	+20°C – 60j	0,06	1,4	0,8	20,5		10,5						1,2 - 1,6 mm		
		308H FCW-PW	ISO 17633-A:T Z 19 9 H P M21/C1 1 AWS A5.22: E308HT1-1/4	625	470	40	+20°C – 60j	0,06	1,4	0,8	20,5		10,5						1,2 mm		
		308H MCW	ISO 17633-A: T Z 19 9 H M M12 1 AWS A5.22: EC308H	600	430	35	+20°C – 80j	0,06	1,4	0,55	20,5		10,5						1,2 - 1,6 mm		
309LSi	For welding stainless steels of similar composition or ferritic stainless steels, joining stainless steels to mild and low-alloyed steels, rebuilding and buffering before cladding or hardfacing. For service temperatures up to 400°C.	309LSi XM	ISO 14343-A: 23 12 L AWS A 5.9: ER309LSi	600	440	41	+20°C – 120j	0,03	1,5	0,85	23,5	-	12,5	-	-	-	-	-	0,6 – 1,6 mm		
		309LSi XT	"				-60°C – 130j												1,0 - 4,0 mm		
		309L SAW	ISO 14343-A: S 23 12 L AWS A5.9: ER309L																1,6 – 5,0 mm		
		309LH E	ISO 3581-A: E 23 12 L R 73 AWS A5.4: E 309L-26	560	400	35	-60°C – 50j	0,04	0,7	0,9	22,5		12,5						2,5 – 5,0 mm		
		309L FCW	ISO 17633-A: T 23 12 L R M21/C1 3 AWS A5.22:E309LT0-1/4	580	460	35	-60°C – 40j	0,03	1,4	0,7	23,5		13,0						1,0 - 1,6 mm		
		309L FCW-PW	ISO 17633-A: T 23 12 L P M21/C1 1 AWS A5.22: E309LT1-1/4	580	460	35	-60°C – 40j	0,03	1,4	0,7	23,5		13,0						1,2 mm		
309L MCW	ISO 17633-A: T 23 12 L M M12 1 AWS A5.22: EC309L	590	400	35	-60°C – 50j	0,02	1,4	0,6	24,0		13,0							1,2 - 1,6 mm			
309LMo	For welding stainless steels of similar composition or ferritic stainless steels. Joining stainless steels to mild and low-alloyed steels. Rebuilding and buffering before cladding or hardfacing. 309LMo has superior resistance to dilution when compared to 309L deposits because of its higher alloy and ferrite content. Compared to the AWS 312 weldments it benefits from an improved strength/ductility balance.	309LMo XM	ISO 14343-A: G 23 12 2 L AWS A 5.9: ER309LMo	600	400	37	+20°C – 110j	0,02	1,5	0,4	22,0	2,7	15,0	-	-	-	-	-	0,6 – 1,6 mm		
		309LMo XT	"																1,0 - 4,0 mm		
		309LMo SAW	"																1,6 - 4,0 mm		
		309MoL E	ISO 3581-A: E 23 12 2 L R 3 2 AWS A 5.4: E309MoL-17	650	450	25	+20°C – 55j	0,02	0,7	0,8	22,5	2,3	12,5						2,0 – 5,0 mm		
		309LMo FCW	ISO 17633-A: T 23 12 2 L R M21/C1 3AWS A5.22:E309MoT0-1/4	760	610	27	+20°C – 55j	0,02	1,4	0,7	23,5	2,7	13,0						1,0 - 1,6 mm		
		309LMo FCW-PW	ISO 17633-A: T 23 12 2 L P M21/C1 3AWS A5.22:E309MoT0-1/4	760	610	27	+20°C – 55j	0,02	1,4	0,7	23,5	2,7	13,0						1,2 mm		
309LMo MCW	ISO 17633-A: T 23 12 2 L M M12 1AWS A5.22:EC309LMo	760	550	32	+20°C – 60j	0,02	1,4	0,55	24,0	2,8	13,0							1,2 - 1,6 mm			
310	Resistant to oxidation and scaling up to 1100°C. It is suitable for welding cast or wrought stainless steels of similar composition and heat resistant ferritic stainless steels. Typically used for furnaces, ovens, heaters etc.	310 XM	ISO 14343-A: 25 20 AWS A 5.9: ER310	580	380	40	+20°C – 170j	0,11	1,8	0,4	26	-	21	-	-	-	-	-	0,6 – 1,6 mm		
		310 XT	"																1,0 - 4,0 mm		
		310 SAW	"																1,6 - 4,0 mm		
		310 E	ISO 3581-A: E 25 20 R 3 2 AWS A 5.4: E310-16	550	400	30	+20°C – 60j	0,1	2,0	0,9	25,5		20,5						2,0 – 5,0 mm		
		310 FCW	ISO 17633-A: T 25 20 R M21/C1 3 AWS A 5.22: E310T0-1/4	600	410	35	+20°C – 60j	0,12	2,4	0,5	24,0		20,5						1,0 - 1,6 mm		
		310 FCW-PW	ISO 17633-A: T 25 20 P M21/C1 1 AWS A 5.22: E310T1-1/4	600	410	35	+20°C – 60j	0,12	2,4	0,5	24,0		20,5						1,2 mm		
310 MCW	ISO 17633-A: T 25 20 M M12 1 AWS A 5.22: (EC310)	630	420	35	+20°C – 70j	0,15	3,0	0,3	26,0		21,0							1,2 - 1,6 mm			
253	Alloy where the weld metal has a scaling temperature beyond 1000°C. The controlled carbon and ferrite levels improve microstructural stability and high temperature strength compared to the 309(L) types whereas the lower nickel content provides better resistance against sulphur attack than the 310 grade. For welding ex 309(S30900), AVESTA 153MA(S30415) and AVESTA 253MA(S30815).	253 XM	Material no: 1.4835	770	600	21	+20°C – 50j	0,02	1,0	0,6	29	0,5	9	-	-	-	-	-	0,6 – 1,6 mm		
		253 XT	"																1,0 - 4,0 mm		
		253 SAW	"																1,6 - 4,0 mm		
		253 E	EN 1600: E 22 12 B 42	>750	>500	20	+20°C – 50j	0,1	0,6	1,0	29	0,5	9						2,0 – 5,0 mm		
		253 FCW-PW	ISO 17633-A: T Z 22 10 N H P M21 1	860	600	22	+20°C – 40j	0,1	1,3	0,8	29	0,3	8,6								1,0 - 1,6 mm

STAINLESS STEEL ALLOYS



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
312	Alloy with high alloy content and high ferrite ratio which allow it to benefit from extreme tolerance to hot cracking and to dilution with a wide range of base materials. Preheat can often be avoided or minimized. The weld deposit workhardens and gives good wear and friction resistance. Examples: Welding stainless steels of similar composition or ferritic stainless steels. Joining stainless steels to mild and low-alloyed steels. Buffer layers before hardsurfacing. Maintenance on hard-to-weld steels. Welding high carbon hardenable steels, of known or unknown composition and generally most of steels subject to cracking such as tool steels, manganese steels, spring steels and high-speed steels. Hardness 240 HB when welded, work hardening to 430 HB.	312 XM	ISO 14343-A: 29 9 AWS A 5.9: ER312	770	600	21	+20°C – 50j	0,02	1,0	0,6	29	0,5	9,0	-	-	-	-	-	0,6 – 1,6 mm		

32 PRODUCT CATALOGUE WELDING

STAINLESS STEEL ALLOYS

PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	TI	CU	NB			
420	Similar to 410 but with higher Cr and carbon for hardfacing applications.	420 XM	AWS A 5.9: ER420	>470	>400	>16		0,31	0,52	0,28	18,0	-	-	-	-	-	-	-	0,8 – 1,6 mm		



NICKEL ALLOYS



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)														DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	W	TI	CU	CO	NB	FE		
625	Used for high temperature strength and structural stability, resistance to general corrosion, pitting, crevice and stress corrosion cracking in severe chloride media. For welding of alloy 625, alloy 825, alloy 25-6MO, and a wide range of high alloy austenitic and super austenitic stainless steels. It is also used for surfacing of steel, for welding 9% Ni steels, and for welding various corrosion-resistant alloys such as alloy 20.	625 XM	ISO 18274: S-Ni 6625(NiCr22Mo9Nb) AWS A 5.14: ER NiCrMo-3	790	520	50	+20°C – 160j -196°C – 100j	0,01	0,1	0,15	22,0	8,7	Rest	-	-	-	-				3,6	0,8– 1,6 mm	
		625 XT	"																			1,0 - 3,2 mm	
		625 SAW	"																			1,6 - 4,0 mm	
		625 XE	ISO 14172: E-Ni 6625(NiCr22Mo9Nb) AWS A 5.11: ER NiCrMo-3	>760	>450	>30	+20°C – 70j	0,04	0,6	0,4	22,0	9,0	Rest									2,5 – 4,0 mm	
		625 XHE	"	>760	>450	>30	+20°C – 70j	0,04	0,8	0,6	21,0	8,5	Rest										
		625 FCW-PW	ISO 12153: T Ni6625(NiCr22Mo9Nb) P M21/C1 1 AWS A5.34: ENiCrMo3T1-1/4	760	500	40	-196°C – 70j	0,02	0,2	0,4	22,0	8,8	Rest									1,2 mm	
82	NiCr-alloyed wire for welding of high nickel content alloys such as inconel 600 and incoloy 800. Used for dissimilar joining of low alloyed steel, stainless steel, nickel steel and cast iron. Used in cryogenics, repair of difficult to weld steels and petro chemical applications.	82 XM	ISO 18274: S-Ni 6082(NiCr20Mn3Nb) AWS A 5.14: ER NiCrFe-3	670	430	42	+20°C – 200j -196°C – 100j	0,03	3,2	0,2	20,5	-	Rest	-	-	-	0,3				2,3	0,8 – 1,6 mm	
		82 XT	"																			1,2 - 4,0 mm	
		82 SAW	"																			1,6 - 4,0 mm	
		82 XE	ISO 14172: S-Ni 6182(NiCr15Fe6Mn) AWS A 5.11: ER NiCrFe-3	>600	>380	>30	+20°C – 80j	0,03	3,2	0,2	20,5		Rest				0,3				2,3	2,5 – 5,0 mm	
		82 FCW	ISO 12153 T Ni 6182 (NiCr15Fe6Mn) B M21 3	610	380	45	-196°C – 90j	0,01	6,0	0,3	17,0		Rest								1,7	1,2 - 1,6 mm	
C-276	Nickel alloyed wire for welding of high nickel content alloys such as Hastelloy C-276, NiMo16Cr15W. Excellent resistance to chlorides, acids and corrosion. Equipment for chemical industry and piping.	C-276 XM	ISO 18274: S-Ni 6276(NiMo16Cr15Fe6W4) AWS A 5.14: ER NiCrMo-4	780	480	37	+20°C – 120j	0,02	0,4	0,05	16,0	16,0	Rest	-	-	3,5	-	-	-	-	6,0	0,8 – 1,6 mm	
		C-276 XT	"																			1,2 - 4,0 mm	
		C-276 SAW	"																			1,6 - 4,0 mm	
		C-276 XE	ISO 14172: E-Ni 6276(NiCr15Mo15Fe6W4) AWS A 5.11: ER NiCrMo-4	>720	>450	>30	+20°C – 70j	0,02	0,6	0,2	16,2	16,0	Rest			4,0					5,0	2,5 – 4,0 mm	
		C-276 FCW	ISO 12153 T Ni6276 (NiCr15Fe6Mn) B M21 3 AWS A 5.34: ENiCrMo4T0-4	740	500	30	-196°C – 60j	0,01	0,4	0,2	16,0	16,0	Rest			4,0					5,0	1,2 - 1,6 mm	
622	Nickel alloyed welding wire for welding steels such as C-22, 625, Incoloy 25-6 and Incoloy 825. Similar to C4 and C-276 alloys but with higher Cr that makes it useful in a broader spectra. Its very much suited for dissimilar welds of stainless, nickel, carbon steel and other low alloyed steels. The high Cr-halt combined with tungsten and Mo gives a very good resistance to corrosion and rust.	622 XM	ISO 18274: S-Ni 6022 AWS A 5.14: ER NiCrMo-10	730	490	38	-196°C – 100j	0,01	0,2	0,05	22,0	14,0	Rest	-	-	3,0	-	-	-	-	4,6	0,8 – 1,6 mm	
		622 XT	"																			1,6 - 4,0 mm	
		622 SAW	"																			1,6 - 4,0 mm	
		122 XE	ISO 14172: ENi6022 AWS A5.11 NiCrMo-10	690		25		0,02	1,0	0,2	21	14,0	Rest			3,0			2,5		5,0	2,0 – 5,0 mm	
59	Nickel alloyed welding wire for welding of Alloy 59, C-276, 625, Incoloy 800 and 825 or other nickel alloyed steels at lower temperature. Also used for joining of austenitic duplex and super-duplex steels. Often used in offshore industry, boilers, containers and pipe systems in chemical and petro -chemical industry.	59 XM	ISO 18274: S-Ni 6059 AWS A 5.14: ER NiCrMo-13	700	450	45	-110°C – 120j	0,01	0,5	0,1	23,0	16,0	Rest	0,4	-	-	0,5	-	-	-	1,5	0,8 – 1,6 mm	
		59 XT	"																			1,6 - 4,0 mm	
		59 SAW	"																			1,6 - 4,0 mm	
686	686 is an austenitic Ni-Cr-Mo-W alloy offering outstanding corrosion-resistance in a range of extreme environments. It can be used to overmatch 59, 622, C276 and 625. It is also used for dissimilar welds in superaustenitic and superduplex stainless steel or combinations of these with Ni base alloys. The high alloy levels of Cr-Mo-W ensure exceptional resistance to pitting, crevice and general corrosion.	686 XM	ISO 18274: S-Ni 6686 AWS A 5.14: ER NiCrMo-14	>760	>690	>35		0,01	0,2	0,01	20,6	16,2	58,0	0,2	-	3,9	0,1	-	-	-	1,0	0,8 – 1,6 mm	
		686 XT	"																			1,6 - 4,0 mm	
		686 SAW	"																			1,6 - 4,0 mm	
		686 XE	ISO 14172: ENi6686 AWS A5.11 NiCrMo-14	690		30		0,02	1,0	0,2	21,0	16,0	Rest	-		4,0	0,2				4,0	2,5 – 5,0 mm	
617	Nickel alloyed welding wire with very high oxidation resistance up to 1100°C. Also used for joining dissimilar heat resistant steels such as Incoloy 800H and 800HT, 600 and 601 as well as cast steels HK40, HP, HP45 for ex. Typical applications: Ovens, combustion chambers, pyrolysis and heat treated components, flares and gas turbine parts.	617 XM	ISO 18274: S-Ni 6617 AWS A 5.14: ER NiCrCoMo-1	740	500	40	+20°C – 200j	0,08	0,1	0,1	22,0	9,0	Rest	1,0	-	-	0,3	-	12	-	0,5	0,8 – 1,6 mm	
		617 XT	"																			1,6 - 4,0 mm	
		617 SAW	"																			1,6 - 4,0 mm	
		117 XE	ISO 14172: ENi6617 AWS A5.11 NiCrCoMo-1	620		25		0,1	1,0	0,5	24,0	9,0	Rest	-					12	1,0	4,0	2,5 – 5,0 mm	
718	Nickel alloyed wire for welding of Inconel 718, 706 and X-750. The weld metal is age hardening and has equivalent properties like to the base material. Used also for cladding in the oil and gas industry. Mechanical properties is depending on the after treatment of the steel.	718 XM	ISO 18274: S-Ni7718 AWS A 5.14: ER NiFeCr-2	860-	580-	28		0,08	0,4	0,4	18,0	3,0	52,0	0,4	-	-	0,9	0,1	1,0	5,0	Rest	0,6 – 1,6 mm	
		718 XT	"	1360	1120																	1,6 - 3,2 mm	
		718 SAW	"																			1,6 - 4,0 mm	

PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)															DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	KV(J)	C	MN	SI	CR	MO	NI	AL	V	W	TI	CU	CO	NB	FE			
60	Nickel and copper alloyed wire for welding and hard-facing copper-nickel alloys and copper-nickel plated steels such as Monel 400, CuNi 90/10, CuNi 70/30 and CuNi30. Also for above grades against carbon steels.	60 XM	ISO 18274: S-NiCu30Mn3Ti AWS A 5.14: ER NiCu-7	510	320	38	+20°C – 180j	0,03	3,5	0,4	-	-	Rest	-	-	-	2,2	29,0	-	-	-	0,6 – 1,6 mm		

ALUMINIUM ALLOYS



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)										DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	AS (%)	SI	FE	CU	MN	MG	ZN	CR	Ti	AL				
Al99,5 (1050)	For welding of mostly pure aluminium in chemistry, electronics, construction and food industries.	Al 99,5 Mig Al 99,5 Mig	ISO 18273: S Al 1050 (Al99,5) "	100	70	30	0,2	0,25	0,05	0,03	0,05	0,04	-	0,03	Rest	0,8 – 2,4 mm 1,6 - 5,0 mm			
Al99,7 (1070)	For welding of mostly pure aluminium in chemistry, electronics, construction and food industries.	Al 99,7 Mig Al 99,7 Tig	ISO 18273: S Al 1070 (Al99,7) "	100	70	30	0,2	0,25	0,05	0,03	0,05	0,04	-	0,03	Rest	0,8 – 2,4 mm 1,6 - 5,0 mm			
Al99,5Ti (1450)	For welding of mostly pure aluminium in chemistry, electronics, construction and food industries. Titanium addition is giving a higher corrosion resistance.	Al 99,5Ti Mig Al 99,5Ti Tig	ISO 18273: S Al 1450 (Al99,5Ti) "	100	70	30	0,25	0,13	0,05	0,05	0,05	0,01	-	0,2	Rest	0,8 – 2,4 mm 1,6 - 5,0 mm			
AlSi5 (4043)	Aluminium tig wire for welding aluminium alloys containing up to 7% Si. Excellent flowability and penetration characteristics. Applications in construction sector and automotive industry as well as cast aluminium.	AlSi5 Mig	ISO 18273:S Al 4043 (AlSi5)	120	80	20	5,0	0,6	0,3	0,15	0,2	0,1	-	0,15	Rest	0,8 – 2,4 mm			
		AlSi5 Tig	"																
		AlSi5 E	AWS A5.3 E4043 DIN 1732 EL-AlSi5	110-160	70-100	>15	5,0	<0,5		<0,5					Rest	2,5- 4,0 mm			
AlSi12 (4047)	Aluminium tig wire for welding and brazing. Good mechanical characteristics and its generally used for brazing aluminium sheets, for extrusions, castings and automotive industry. High silicon reduces melting point and increases fluidity.	AlSi12 Mig	ISO 18273:S Al 4047 (AlSi12)	140	80	20	12,0	0,1	0,007	0,01	0,02	0,2	-	0,15	Rest	0,8 – 2,4 mm			
		AlSi12 Tig AlSi12 E	" AWS A5.3 E4047 DIN 1732 EL-AlSi12	110-160	80	>5	12,0	<0,5		<0,5								2,5- 4,0 mm	
4145	Aluminium tig wire for welding and brazing. Low melting temperature and high fluidity. Gives a very high resistance to weld cracking when used with 2-series aluminium, aluminium-copper, or aluminium-copper-silicon castings.	4145 Mig 4145 Tig	ISO 18273:S Al 4145 (AlSi10Cu4) "				10,0	0,8	3,3-4,7	0,15	0,15	0,2	0,15	-	Rest	0,8 – 2,4 mm 1,6 - 5,0 mm			
AlMg3Mn (5554)	Alloy 5554 was originally developed as a filler alloy for use with alloy 5454 as this combination of alloys does not become sensitive to stress corrosion cracking at elevated temperatures.	AlMg3Mn Mig AlMg3Mn Tig	ISO 18273:S Al 5554 (AlMg2,7Mn) "	250	100	18	0,25	0,4	0,1	0,5-1,0	2,4-3,0	0,25	0,1	0,05-0,2	Rest	0,8 – 2,4 mm 1,6 - 5,0 mm			
AlMg3 (5754)	For welding aluminium base alloys with maximum 3% Mg. For construction and general industry. Corrosion resistant.	AlMg3 Mig AlMg3 Tig	ISO 18273:S Al 5754 (AlMg3) "	250	120	22	0,05	0,13	-	0,15	3,1	-	0,3	-	Rest	0,8 – 2,4 mm 1,6 - 5,0 mm			
AlMg4,5Mn (5183)	For welding aluminium base alloys that require high mechanical properties. Construction, offshore and automotive industry. Very good saltwater resistance.	AlMg4,5Mn Mig AlMg4,5Mn Tig	ISO 18273:S Al 5183 (AlMg4,5Mn0,7) "	275	130	18	0,2	0,13	0,1	0,5-1,0	4,8	0,02	0,1	0,1	Rest	0,8 – 2,4 mm 1,6 - 5,0 mm			
AlMg4,5MnZr (5087)	For welding aluminium base alloys that require high mechanical properties. Construction, offshore and automotive industry. Very good saltwater resistance. Zr improves bending and corrosion resistance.	AlMg4,5MnZr Mig AlMg4,5MnZr Tig	ISO 18273:S Al 5087 (AlMg4,5MnZr) "	275	125	17	0,25	0,4	0,05	0,7-1,1	4,8	0,02	0,1	0,1	Rest + Zr 0,2	0,8 – 2,4 mm 1,6 - 5,0 mm			
AlMg5 (5356)	For welding aluminium base alloys with max 5,% magnesium. Construction, ships, tanks and automotive industry. High corrosion resistance.	AlMg5 Mig	ISO 18273:S Al 5356 (AlMg5Cr)	265	120	18	0,25	0,4	0,1	0,05-0,2	5,0	0,1	0,1	0,1	Rest	0,8 – 2,4 mm			
		AlMg5 Tig AlMn E	" DIN 1732 EL-AlMn1	145	40	20	-	-	-	1,5	0,2	-	-	-	Rest	2,5- 4,0 mm			
AlMg5Mn (5556A)	For welding aluminium base alloys with max 5% magnesium where high tensile strenght is required. Addition of Ti increases corrosion resistance and decreases heat cracks. General construction, military industry.	AlMg5Mn Mig AlMg5Mn Tig	ISO 18273:S Al 5556A (AlMg5Mn) "	275	125	17	0,25	0,4	0,1	0,6-1,0	5,0	0,1	0,1	0,1	Rest	0,8 – 2,4 mm 1,6 - 5,0 mm			

PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				N/MM²	ELONGATION(%)	HARDNESS (HB)	MELTING RANGE (°C)	DENSITY KG/DM³	CU	AL	SI	SN	MN	NI	P	FE	AG	TI			
CuSn	Sn-alloyed copper based wire for welding of copper and copper alloys like S55010,5011,5013 and 5015.	CuSn Mig CuSn Tig	ISO 24373: Cu1898 (CuSn1) AWS A5.7: ERCu "	220	30	60	1020-1050	8,9	Rest	-	0,2	0,8	0,2	-	0,01	-	-	-	0,8 – 2,4 mm 1,6 - 4,0 mm		

COPPER ALLOYS



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)												DIMENSIONS	WELDING POSITIONS
				N/MM²	ELONGATION(%)	HARDNESS (HB)	MELTING RANGE (°C)	DENSITY KG/DM³	CU	AL	SI	SN	MN	NI	P	FE	AG	TI			
CuAg	Silver alloyed copper wire for welding and joining copper.(deoxidized copper, OF-copper). High fluidity, no pores and high electrical conduction.	CuAg Mig CuAg Tig	ISO 24373: Cu1897 (CuAg) "	200	30	60	1070-1080	8,9	Rest	-	-	-	0,1	-	0,05	-	1,0	-	0,8 – 2,4 mm 1,6 - 4,0 mm		
OF-Cu	Oxygen free copper alloy for joining of copper, steel and stainless steel. Especially used in furnace brazing with vacuum or protective gas.		not standardized	200	40	50	1083	8,93	99,99	-	-	-	-	-	-	-	-	-	0,8 – 2,4 mm 1,6 - 4,0 mm		
SF-Cu	Oxygen free special copper alloy for joining of grey cast iron and steel as well as copper to copper. Especially used in furnace brazing with vacuum or protective gas.		not standardized	220	40	50	1080	8,9	Rest	-	-	-	-	-	0,05	-	-	-	0,8 – 2,4 mm 1,6 - 4,0 mm		



CAST IRON



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)															DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5(%)	HARDNESS (HB)	C	MN	SI	CR	MO	NI	AL	V	W	TI	CU	CO	NB	FE			
55	Ferro-nickel alloyed filler metal (Ni55/Fe45) for welding and repairing of grey, malleable, nodular and phosphorus cast iron. Good flow of the weld metal and excellent welding characteristics. Foundry defects, repair on engine blocks, gearboxes, valve bodies, pump bodies etc. 55 XE has copper coated core wire for extra resistance to overheating during welding.	55 XM	AWS A 5.14: E NiFe-Cl DIN 8573: SG NiFe-1 "	550	350	-	200	0,03	0,5	0,2	-	-	55	-	-	-	-	-	-	-	Rest	0,8– 1,6 mm		



TITANIUM ALLOYS



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)								DIMENSIONS	WELDING POSITIONS
				RM (MPa)	RP 0,2	A5 (%)	TI	FE	C	N	H	V	AL	PD	O		
Grade 1	Grade 1 is the softest titanium and has the highest ductility. It has excellent corrosion and oxidation resistance. It also has excellent welding properties and high impact toughness. Used in chemical industry, naval and aeronautic applications.	Titan grade 1 Mig Titan grade 1 Tig	AWS 5.16: ERTi-1 "	320	250		Rest	0,08	0,03	0,015	0,08	-	-	-	0,03-0,10	0,8 – 1,6 mm 1,2 - 4,0 mm	
Grade 2	Similar to grade 1 but with higher oxygen content. Often called the workhorse of titanium alloys and is slightly stronger than grade 1 but equally corrosion resistant.	Titan grade 2 Mig Titan grade 2 Tig	AWS 5.16: ERTi-2 "	390-540	290	20	Rest	0,12	0,03	0,015	0,008	-	-	-	0,08-0,16	0,8 – 1,6 mm 1,2 - 4,0 mm	
Grade 5 (Ti6Al-4V)	Al and V alloyed Titanium. Titanium Grade 5 is the most commercially available of all titanium alloys. It offers an excellent combination of high strength and toughness. Resistant to high temperatures. Can be heat treated to get even higher properties. Used for Aerospace-, medicinal-, chemical-, automotive- and marine applications	Titan grade 5 Mig Titan grade 5 Tig	AWS 5.16: ERTi-5 (Ti6Al-4V) AMS4954 "	1000	810		Rest	0,22	0,05	0,03	0,015	3,5-4,5	5,5-6,75	-	0,12-0,2	0,8 – 1,6 mm 1,6 - 4,0 mm	
Grade 7 (Ti-0,2Pd)	Grade 7 has physical and mechanical properties equivalent to CP3 titanium or Grade 2. It has excellent welding and fabrication properties and is extremely resistant to corrosion especially from reducing acids.	Titan grade 7 Mig Titan grade 7 Tig	AWS 5.16: ERTi-7 (Ti-6Al-4V) AMS4954 "	400	275	20	Rest	0,12	0,03	0,015	0,008	-	-	0,12-0,25	0,08-0,16	0,8 – 1,6 mm 1,6 - 4,0 mm	
Grade 9 (Ti3Al-2,5V)	Grade 9 has medium strength that falls between Grade 4 and Grade 5. It has excellent corrosion resistance and is used in Aerospace and Industrial applications. Grade 9 Titanium can be used at higher temperatures than Grades 1 through 4. Grade 9 titanium has good cold rolling properties.	Titan grade 9 Mig Titan grade 9 Tig	AWS 5.16: ERTi-9 (Ti-3Al-2,5V) "	850	620	15	Rest	<0,25	<0,08	<0,03	0,015	2,0-3,0	2,5-3,5	-	<0,15	0,8 – 1,6 mm 1,6 - 4,0 mm	
Grade 12 (Ti0,8Ni0,3Mo)	Grade 12 is an intermediate strength grade originally developed to provide enhanced crevice-corrosion resistance in high temperature brines, but at lower cost than Grade 7. Grade 12 has better elevated temperature properties than Grade 2 and is sometimes specified for pressure vessels or piping for its superior strength alone.	Titan grade 12 Mig Titan grade 12 Tig	AWS 5.16: ERTi-12 (Ti0,8Ni0,3Mo) "	480	340		Rest	<0,3	<0,08	<0,03	<0,15	-	-	-	<0,25 + Ni 0,8 + Mo 0,3	0,8 – 1,6 mm 1,6 - 4,0 mm	
Grade 23 (Ti6Al-4VELI)	Titanium Grade 23 is similar to Grade 5 but has lower oxygen, nitrogen and iron levels. However it has higher fracture toughness and better ductility than grade 5.	Titan grade 23 Mig Titan grade 23 Tig	AWS 5.16: ERTi-9 (6Al-4VELI) AMS4956 "	1000	810		Rest	<0,25	<0,08	<0,03	<0,0125	3,5-4,5	5,5-6,75	-	<0,13	0,8 – 1,6 mm 1,6 - 4,0 mm	



PRODUCT	DESCRIPTION	TYPE	NORM	MECHANICAL		PROPERTIES		WELD METAL COMPOSITION (%)											DIMENSIONS	WELDING POSITIONS
				RM (MPA)	RP 0,2	A5 (%)	MG	AL	SI	MN	ZN	ZR	C	N	H	FE+CR	NB	O		
MgAl (AZ61A)	Magnesium/Aluminium alloy for brazing and tig welding of almunium and magnesium alloys with high Mg content. Used to join or repair light metal, rims, engine blocks and other components that are difficult to weld.	MgAl Tig	ISO 3677: B-MgAl 525/610 EN 1044: MgAl		180		Rest	6,5	0,2	0,3	1,0	-	-	-	-	-	-	-	1,6 - 3,0 mm	
Zr 702	Zirconium welding consumable for welding process equipment exposed to high corrosion from organic and inorganic acids, salt, alkalis, sulfur, nitric hydrochloric etc. Common applications: pumps, tanks, valves, heat exchangers, boilers. Used with Inert gas(Ar and Ar/He mix)	Zr 702 Tig	AWS A5.24: ER Zr2 UNS No. R60702	380	205	16	-	-	-	-	-	Rest (incl Hf <4,5)	0,05	0,05	0,005	0,2	-	0,11-0,15	1,6 - 3,2 mm	
Zr 705	Zirconium welding consumable for welding process equipment exposed to high corrosion from organic and inorganic acids, salt, alkalis, sulfur, nitric hydrochloric etc. Alloyed with 3% Niobium to increase the strenght. Common applications: fasteners, shafts, constructions, boilers. Used with Inert gas(Ar and Ar/He mix)	Zr 705 Tig	AWS 5.16: ERTi-5 (Ti6Al-4V) AMS4954	580	380	16	-	-	-	-	-	Rest (incl Hf <4,5)	0,05	0,05	0,005	0,2	2,0-3,0	0,11-0,16	1,6 - 3,2 mm	



PACKAGING DETAILS



	ELECTRODES Cardboard box with shrink plastic		PLASTIC SPOOL D100 Outside diameter: 100mm Width: 55mm Weight: Aluminium: 0,5kg Others: 1kg
	ELECTRODES Vacuum packed		PLASTIC SPOOL D200 Outside diameter: 200mm Width: 55mm Weight: Aluminium: 2kg Others: 5kg
	ELECTRODES Plastic box		PLASTIC SPOOL D300 Outside diameter: 300mm Width: 100mm Weight: Aluminium: 7kg Others: 15kg
	TIG RODS & GAS RODS Lenght: 700mm, 915mm, 1000mm Weight: Aluminium: 2,0-2,5kg Others: 5kg		METAL BASKET BS300,S300 Outside diameter: 300mm Width: 100mm Weight: Aluminium: 7kg Others: 15kg, 16kg

	METAL BASKET B300, K300 Outside diameter: 300mm Width: 100mm Weight: Aluminium: 7kg Others: 15kg, 16kg		METAL BASKET K415 Outside diameter: 415mm Width: 100mm Weight: Aluminium: 15kg Others: 25kg
	UNALLOYED & LOW ALLOYED Weight & dimensions: 100kg 520 x 415mm 250kg 520 x 835mm 500kg 660 x 835mm		SB - DISPLAY Distributor display with small packs of electrodes and brazing rods for all materials. For more info on the range - go to www.meltolit.se 
	STAINLESS STEEL & NICKEL ALLOYS Weight & dimensions: 100kg 515 x 550mm 250kg 515 x 830mm		
	ALUMINIUM ALLOYS Weight & dimensions: 100kg 550 x 750mm 200kg 650 x 930mm		
	COPPER ALLOYS Weight & dimensions: 100kg 510 x 410mm 200kg 510 x 800mm 250kg 630 x 745mm		

DRUM ACCESSORIES



	DRUM CONE for drums with metal ring sealing 51cm 52cm 66cm		DRUM DOLLY 53cm 66cm
	DRUM CONE 51cm 58cm 67cm		DRUM LIFTER adjustable 51-66cm
	POLYMER CONDUIT 1,5m 3,0m 5,0m		DRUM LIFTER non adjustable 51-52cm 58-61cm
	EXTRA FLEXIBLE CONDUIT 1,5m 3,0m 5,0m 8,0m 10,0m		DRUM LIFTER for fork lifts

	MECHANICAL TURN TABLE For SAW drums		DIRECT PULL KIT Cone connector with quick connect/disconnect
	GUIDE MODULES To avoid bends in the conduits and ease wire feeding		CONDUIT CONNECTORS To connect your conduit to your wire feeder. Large range of various connectors for each machine manufacturer
	PNEUMATIC WIRE FEED ASSIST For installations where a long cable run cannot be avoided		
	WIRE STRAIGHTENER Used to bend the wire straight before the feeder to avoid a vobbeling arc. Especially for aluminium.		

NICKEL ALLOYS SELECTION CHART

NICKEL ALLOYS	NICKEL 200	MONEL 400	INCONEL 600	INCONEL 625	INCONEL 686	INCOLOY 803, 800, 800H/HT	INCOLOY 825	Carbon, low alloy & nickel steels	3-30% Cromium steels	Austenitic stainless steels	Duplex & Super-Duplex steels	Cast high-temperature alloys	Copper-Nickel alloys
NICKEL 200	61 XM/XT	60 XM/XT 61 XM/XT	82 XM/XT 61 XM/XT	625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT 61 XM/XT	82 XM/XT 61 XM/XT	625 XM/XT 82 XM/XT	82 XM/XT 61 XM/XT	82 XM/XT 61 XM/XT	82 XM/XT 61 XM/XT	686 XM/XT 82 XM/XT	82 XM/XT 61 XM/XT	60 XM/XT 61 XM/XT
MONEL 400	60 XE 61 XE	60 XM/XT/XE 625 XM/XT/XE	625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT 61 XM/XT	686 XM/XT 625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT 60 XM/XT	625 XM/XT 82 XM/XT 60 XM/XT	625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	60 XM/XT 61 XM/XT
INCONEL 600	82 XE 625 XE	82 XE 625 XE	82 XM/XT/XE	625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT 82 XM/XT	617 XM/XT 625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	617 XM/XT 625 XM/XT 82 XM/XT	686 XM/XT 82 XM/XT	617 XM/XT 625 XM/XT 82 XM/XT	82 XM/XT 61 XM/XT
INCONEL 625	82 XE 625 XE 61 XE	82 XE 625 XE 61 XE	82 XE 625 XE	625 XM/XT/XE	686 XM/XT 625 XM/XT	617 XM/XT 625 XM/XT 82 XM/XT	625 XM/XT	686 XM/XT 625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT	617 XM/XT 625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT 61 XM/XT
INCONEL 686	686 XE 82 XE 61 XE	686 XE 82 XE 625 XE	82 XE 686 XE	686 XE 625 XE	686 XM/XT/XE	686 XM/XT 617 XM/XT 625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT	686 XM/XT 625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT 82 XM/XT	686 XM/XT	686 XM/XT 617 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT 61 XM/XT
INCOLOY 803, 800, 800H/HT	82 XE 625 XE 61 XE	625 XE 82 XE	625 XE 617 XE	625 XE 82 XE 617 XE	686 XE 82 XE	617 XM/XT/XE 82 XM/XT/XE	625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	617 XM/XT 625 XM/XT 82 XM/XT	617 XM/XT 625 XM/XT 82 XM/XT	686 XM/XT 82 XM/XT	617 XM/XT 625 XM/XT 82 XM/XT	82 XM/XT 61 XM/XT
INCOLOY 825	82 XE 61 XE	625 XE 82 XE	625 XE 82 XE	625 XE 622 XE 686 XE	686 XE 625 XE 622 XE	625 XE 82 XE	686 XM/XT/XE 625 XM/XT/XE	625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT 622 XM/XT	625 XM/XT 82 XM/XT	82 XM/XT 61 XM/XT
Carbon, low alloy & nickel steels	82 XE 625 XE 61 XE	625 XE 82 XE 60 XE	625 XE 82 XE	625 XE 82 XE	686 XE 82 XE 625 XE	82 XE 617 XE	625 XE 82 XE	625 XM/XT/XE 82 XM/XT/XE	625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	686 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT	82 XM/XT 61 XM/XT
3-30% Cromium steels	82 XE 625 XE 61 XE	625 XE 82 XE	625 XE 82 XE 617 XE	625 XE 82 XE	686 XE 82 XE 625 XE	82 XE 617 XE	625 XE 82 XE	625 XE 82 XE	625 XM/XT/XE 82 XM/XT/XE	625 XM/XT 82 XM/XT	686 XM/XT 625 XM/XT 82 XM/XT	625 XM/XT 82 XM/XT 617 XM/XT	82 XM/XT 61 XM/XT
Austenitic stainless steels	82 XE 625 XE 61 XE	625 XE 82 XE 60 XE	625 XE 82 XE 617 XE	686 XE 625 XE	686 XE 82 XE 625 XE	82 XE 625 XE 617 XE	625 XE 82 XE	625 XE 82 XE	625 XE 82 XE	686 XM/XT/XE 82 XM/XT/XE 625 XM/XT/XE	686 XM/XT 82 XM/XT	82 XM/XT 61 XM/XT	82 XM/XT 61 XM/XT
Duplex & Super-Duplex steels	686 XE 82 XE 61 XE	686 XE 82 XE	686 XE 82 XE	686 XE 625 XE	686 XE	686 XE 82 XE	686 XE 625 XE	686 XE 82 XE	686 XE 82 XE	686 XE 82 XE	622 XM/XT/XE	686 XM/XT 82 XM/XT	686 XM/XT 82 XM/XT
Cast high-temperature alloys	82 XE 625 XE 61 XE	625 XE 82 XE 60 XE	82 XE 617 XE	82 XE 617 XE	686 XE 617 XE	82 XE 617 XE	625 XE 82 XE	625 XE 82 XE	82 XE 625 XE 617 XE	625 XE 82 XE 617 XE	686 XE 82 XE	617 XM/XT/XE 82 XM/XT/XE	82 XM/XT 61 XM/XT
Copper-Nickel alloys	60 XE 61 XE	82 XE 61 XE	82 XE 61 XE	82 XE 625 XE 61 XE	686 XE 61 XE	82 XE 61 XE	82 XE 61 XE	82 XE 60 XE 61 XE	82 XE 61 XE	82 XE 61 XE	686 XE 82 XE	82 XE 61 XE	67 XE

XM = MIG WIRE XT = TIG WIRE XE = STICK ELECTRODES

ALUMINIUM SELECTION CHART



ALUMINUM ALLOYS	1050 1070 1080 1350 1100	2014 2036 2219 2519	3003 3004 3103	5005 5050 5052	5083 5456	5086 5056	5754 5454	511-514 535 5154 5254	6005 6005A 6061 6070 6063 6082 6101 6151 6201 6351 6959	7005 7021 7039 7046 7146	413 443 444 356 A356 A357 359	319 333 354 355 C355 380
319 333 354 355 C355 380	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AlCu6 B: AlCu6 C: AlCu6	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AlCu6 B: AlCu6 C: AlCu6
413 443 444 356 A356 A357 359	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12					A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	
7005 7021 7039 7046 7146	A: AISi5 B: AlMg5 C: AlMg5	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5 B: AlMg5 C: AlMg5	A: AISi5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn		
6005 6005A 6061 6070 6063 6082 6101 6151 6201 6351 6959	A: AISi5 B: AlMg5 C: AlMg5	A: AISi5 B: AISi5 C: AISi5	A: AISi5 B: AlMg5 C: AISi5	A: AISi5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg5 C: AlMg5			
511-514 535 5154 5254	A: AlMg5 B: AlMg5 C: AlMg5		A: AlMg5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn				
5754 5454	A: AlMg5 B: AlMg5 C: AlMg5		A: AlMg5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn					
5086 5056	A: AlMg5 B: AlMg5 C: AlMg5		A: AlMg5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg5 C: AlMg5			TYPE OF CHOICE OF THE FILLER METAL A: Welder appeal B: Best mechanical properties C: Corrosion resistance			
5083 5456	A: AlMg5 B: AlMg5 C: AlMg5		A: AlMg5 B: AlMg5 C: AlMg5	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn	A: AlMg5 B: AlMg4,5Mn C: AlMg4,5Mn							
5005 5050 5052	A: AISi5 B: Al99,5(Ti) C: Al99,5(Ti)		A: AlMg3 B: AlMg5 C: AlMg5	A: AlMg3 B: AlMg5 C: AlMg5								
3003 3004 3103	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AISi5 B: AlMg5 C: AlMg5									
2014 2036 2219 2519	A: AISi5/AISI12 B: AISi5/AISI12 C: AISi5/AISI12	A: AlCu6 B: AlCu6 C: AlCu6										
1050 1070 1080 1350 1100	A: Al99,5(Ti) B: Al99,5(Ti) C: Al99,5(Ti)					The general recommendation is to always seek as equivalent filler metal according to your base material.						

SSAB STEEL SELECTION GUIDE

SSAB STEELS	MMA ELECTRODES	TIG	MIG/MAG SOLID WIRE	FCW FLUX CORED WIRE	MCW METAL CORED WIRE
DOMEX					
315 ML/MC	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
355 ML/MC	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
420 ML/MC	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
500 ML/MC	9018-D1 E	SG 100	SG 100	690	742
550 ML/MC	9018-D1 E	SG 100	SG 100	690	742
STRENX					
600	11018 E	SG 110	SG 110	690	742
650	11018 E	SG 110	SG 110	690	742
700	11018 E	SG 110	SG 110	690	742
900	-	T90	T90	-	1100
960	-	T96	T96	-	1100
1100	-	T96	T96	-	1100
1300	-	T96	T96	-	1100
HARDOX					
HiTemp	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
HiAce	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
HiTuf	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
400	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
450	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
500	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
500Tuf	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
550	48 E, 7016 E	SG3	SG2, SG3, EVO2, EVO3, NW3	713	710
600	307 E	307 XT	307 XM	707 FCW	707 MCW
Extreme	307 E	307 XT	307 XM	707 FCW	707 MCW
ARMOX					
370T	307 E	307 XT	307 XM	707 FCW	707 MCW
440T	307 E	307 XT	307 XM	707 FCW	707 MCW
500T	307 E	307 XT	307 XM	707 FCW	707 MCW
600T	307 E	307 XT	307 XM	707 FCW	707 MCW
Advance	307 E	307 XT	307 XM	707 FCW	707 MCW
WEATHERING					
COR-TEN A, B, Weathering	Corten E	Corten	Corten	781	-

SHIELDING GASES ACC. DIN EN ISO 14175

DESIGNATION		COMPONENTS IN VOL.(%)					
MAIN GROUP	SUB GROUP	OXIDIZING		INERT		REDUCING	INERT
		CO ₂	O ₂	Ar	He	H ₂	N ₂
I	1 2 3			100 Balance ²	100 0,5 ≤ He ≤ 95		
M1	1 2 3 4	0,5 ≤ CO2 ≤ 5 0,5 ≤ CO2 ≤ 5 0,5 ≤ CO2 ≤ 5	 0,5 ≤ O2 ≤ 3 0,5 ≤ O2 ≤ 3	Balance ² Balance ² Balance ² Balance ²		0,5 ≤ H2 ≤ 5	
M2	0 1 2 3 4 5 6 7	5 < CO2 ≤ 15 15 < CO2 ≤ 25 0,5 ≤ CO2 ≤ 5 5 < CO2 ≤ 15 5 < CO2 ≤ 15 15 < CO2 ≤ 25 15 < CO2 ≤ 25	 3 < O2 ≤ 10 3 < O2 ≤ 10 0,5 ≤ O2 ≤ 3 3 < O2 ≤ 10 0,5 ≤ O2 ≤ 3 3 < O2 ≤ 10	Balance ² Balance ² Balance ² Balance ² Balance ² Balance ² Balance ² Balance ²			
M3	1 2 3 4 5	25 < CO2 ≤ 50 25 < CO2 ≤ 50 5 < CO2 ≤ 25 25 < CO2 ≤ 50	 10 < O2 ≤ 15 2 < O2 ≤ 10 10 < O2 ≤ 15 10 < O2 ≤ 15	Balance ² Balance ² Balance ² Balance ² Balance ²			
C	1 2	100 Balance	 0,5 ≤ O2 ≤ 30				
R	1 2			Balance ² Balance ²		0,5 ≤ H2 ≤ 5 15 < H2 ≤ 50	
N	1 2 3 4 5			Balance ² Balance ² Balance ²		 0,5 ≤ H2 ≤ 10 0,5 ≤ H2 ≤ 50	100 0,5 ≤ N2 ≤ 5 5 < N2 ≤ 50 0,5 ≤ N2 ≤ 5 Balance
O	1		100				
Z	Gas mixtures with components not listed in the table or gas mixtures with a of the specified range. ³						
"2 You may change Ar to He completely or partially							
3 Two equally gas mixtures i Z must not be replaced against each other"							

GAS SELECTION GUIDE

Method	ALLOY	FIRST CHOICE	EXAMPLES BRAND NAMES	OPTIONS
TIG	All metals	I1	MISON Ar, ARCAL PRIME	I3, R1, N2
	Titanium	I3	MISON He30, ARCAL 33	I1
MIG/MAG	Unalloyed & low alloyed ALL	M21	MISON 18, ARCAL FORCE	M20, C1
	Stainless & Nickel solid wires	M12	MISON 2, ARCAL CHROME	I3
	Stainless & Nickel FCW	M21	MISON 18, ARCAL FORCE	M20, C1
	Stainless & Nickel MCW	M12	MISON 2, ARCAL CHROME	M13, I3
	Cobalt FCW	I1	MISON Ar, ARCAL PRIME	I3
	Copper	I1	MISON Ar, ARCAL PRIME	I3
	Aluminium	I1	MISON Ar, ARCAL PRIME	I3
ROOT PROTECTION	Unalloyed & low alloyed	I1	MISON Ar, ARCAL PRIME	
	Stainless & Nickel	N5	Formier	I1
	Copper	I1	MISON Ar, ARCAL PRIME	
	Titanium	I1	MISON Ar, ARCAL PRIME	

WELDING POSITIONS ACC. TO ASME & EN ISO 6947

BUTT WELDS - PLATES



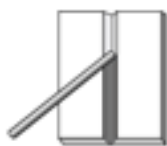
EN - PA
ASME - 1G



EN - PC
ASME - 2G



EN - PE
ASME - 4G



EN - PF
ASME - 3G



EN - PG
ASME - 3G

BUTT WELDS - PIPES



EN - HL-045
ASME - 6G



EN - JL-045
ASME - 6G



EN - PA
ASME - 1G



EN - PC
ASME - 2G



EN - PF
ASME - 5G

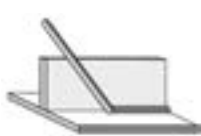


EN - PG
ASME - 5G

FILLET WELDS - PLATES



EN - PA
ASME - 1F



EN - PB
ASME - 2F



EN - PD
ASME - 4F



EN - PG
ASME - 3F



EN - PF
ASME - 3F

FILLET WELDS - PIPES



EN - PB
ASME - 2F



EN - PB
ASME - 2F



EN - PD
ASME - 4F



EN - PF
ASME - 5F



EN - PG
ASME - 5F

DENSITY

ALLOYS	ALUMINIUM d : 2,7 g/cm ³		TITANIUM d : 4,5 g/cm ³		STAINLESS STEEL d : 7,85 g/cm ³		COPPER d : 8,9 g/cm ³	
	g/m	m/kg	g/m	m/kg	g/m	m/kg	g/m	m/kg
0.6	0.76	1310	1.27	786	2.22	450	2.52	397
0.8	1.36	735	2.26	442	3.94	254	4.47	224
1.0	2.12	472	3.53	283	6.16	162	6.98	143
1.2	3.05	328	5.08	197	8.87	113	10.06	100
1.6	5.42	184	9.04	111	15.77	63	17.88	56
2.0	8.48	118	14.13	71	24.65	41	27.95	36
2.4	12.21	82	20.34	49	35.48	28	40.23	25
3.0	19.07	52	31.79	31	55.46	18	62.88	16
3.2	31.70	46	36.17	28	63.10	16	71.54	14
4.0	33.91	29	56.52	18	98.59	10	111.78	9
5.0	52.99	19	88.31	11	154.06	7	174.66	6

d : density, g/m : gr. Per meter, m/kg : meter per kg

CONVERSION TABLE INCH TO MM

1 Inch = 25,4mm		
Ø mm	Ø (inch)	Ø (inch)
0.6	1/44	0.0236
0.8	1/32	0.0315
1.0	1/ 26	0.0393
1.2	3/64	0.0472
1.6	1/16	0.0629
2.0	5/64	0.0781
2.4	3/32	0.0945
3.2	1/8	0.1259
4.0	5/32	0.1574

ELEMENTS

METALS	CHEMICAL ELEMENTS
Ag	Silver
Al	Aluminium
Au	Gold
Bi	Bismuth
Cd	Cadmium
Co	Cobalt
Cr	Chromium
Cu	Copper
Fe	Iron
Hf	Hafnium
In	Indium
Mg	Magnesium
Mn	Manganese
Mo	Molybdenum
Ni	Nickel
Nb	Niobium
P	Phosphorus
Pd	Palladium
Sb	Antimony
Si	Silicium
Sn	Tin
Ti	Titanium
Ta	Tantalum
V	Vanadium
W	Wolfram
WC	Wolfram carbide
Zn	Zink
Zr	Zirkonium

NOTES

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

NOTES

[illegible]

NOTES





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hardfacing consumables
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J A Gahms gata 4, S-421 31 Västra Frölunda
Tel. +46 (0)31- 748 52 25 Fax +46 (0)31- 28 64 65
info@meltolit.se www.meltolit.se

