

# UTP.



**Welding Consumables**



# WELDING CONSUMABLES

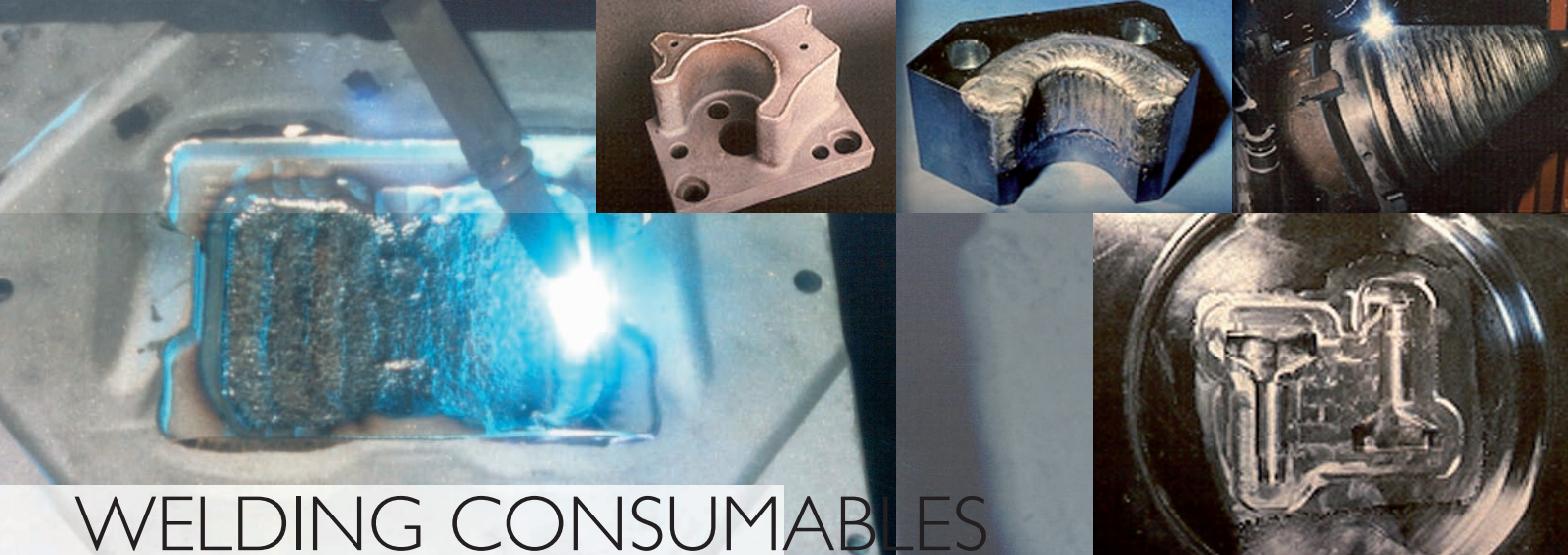
## ■ Surfacing and Hardfacing

UTP-Product	DIN 8555 AWS A 5.13	Hardness of the pure welding deposit	SMAW	FCAW	Application field
CHRONOS	E 7-UM-200-KP	<b>After welding:</b> appr. 220 HB <b>After work hardening:</b> up to 550 HB	●		Basic coated high Mn-steel electrode for claddings exposed to compression and shock. <b>Recovery 110 %.</b> [= +/-]
7200	E 7-UM-200-KP ~E FeMn-A	<b>After welding:</b> appr. 200 - 250 HB <b>After work hardening:</b> up to 400 - 450 HB	●		Basic coated, CrNi alloyed Mn hard-steel electrode for joining and surfacing against extreme impact, compression and shock. . <b>Recovery 130 %</b> [= +/-]
BMC	E 7-UM-250-KPR	<b>After welding:</b> appr. 260 HB <b>Work hardened:</b> up to 550 HB	●		Welding consumables used for buildups on parts made of high Mn-steel subjected to highest compression and impact in combination with abrasion. [= +/-]
AF BMC	MF 7-GF-250-KP	<b>After welding:</b> appr. 260 HB <b>Work hardened:</b> up to 550 HB		●	Application field like BMC. [= +]
AFA 7	MF 8-GF-200-ZRKN	<b>After welding:</b> appr. 200 HB <b>Work hardened:</b> up to 400 HV		●	Fully austenitic CrNiMn open arc wire for buffer layers and crack resistant joints. [= +]
718 S AF 718 S	E 10-UM-60-6	60 HRC	●		High-efficiency welding consumables for high wear resistant claddings against abrasion, special for the sugar cane industry. [= +/-]
LEDURIT 60	E 10-UM-60-GRZ	appr. 60 HRC 1 layer on steel with C=0,15 % appr. 55 HRC	●		Rutile coated electrode for high abrasion and medium impact loads suited for highly wear resistant claddings on parts subjected to strong grinding abrasion combined with medium impact. [= +/-]
LEDURIT 61	~E FeCr-Al	1 layer on high Mn-steel appr. 52 HRC	●		[= +/-]
LEDURIT 65	E 10-UM-65-GRZ	appr. 65 HRC 1 layer on steel with C=0,15 % appr. 58 HRC 1 layer on high Mn-steel appr. 55 HRC	●		Basic coated, high-efficiency hardfacing electrode suited for highly abrasion resistant claddings on parts subjected to extreme sliding mineral abrasion. <b>Recovery 240 %.</b> [= +/-]
AF LEDURIT 60	MF 10-GF-60GR	56 - 58 HRC		●	Flux-cored, chromium carbide wire for highly wear resistant hardfacings for exposure to abrasion. [= +]

UTP-Product	DIN 8555	Hardness of the pure welding deposit	FCAW	Application field
AF LEDURIT 68	MF 10-GF-65-GR	63 - 65 HRC	●	Flux-cored, chromium carbide wire for highly wear resistant hardfacings exposed to abrasion. <span style="float: right;">= +</span>
AF LEDURIT 76	MF 10-GF-70-GRTZ	<b>After welding:</b> Heat resistant up to 500° C Heat resistant up to 600° C Heat resistant up to bei 700° C	●	Cr-Nb-B-carbid open arc wire for highly heat-resitant hardfacing against friction. <span style="float: right;">= +</span>



UTP-Product	DIN 8555	Hardness	SMAW	GMAW	GTAW	FCAW	Application field
DUR 250	E 1-UM-250	<b>After welding:</b> appr. 270 HB I layer on steel with C = 0,5 % : appr. 320 HB	●				Basic coated electrode for tough, easily machinable buildups. <b>Recovery 110 %.</b> <span style="float: right;">= +/-</span>
A DUR 250	MSG 1-GZ-250	<b>After welding:</b> appr. 250 HB I layer on steel with C = 0,5 % : appr. 320 HB		●			Copper coated wire for tough but machinable buildups exposed to rolling wear.
AF DUR 250	MF 1-GF-250	<b>After welding:</b> appr. 280 HB				●	Flux-cored wire used for buildups on parts which are mainly subjected to rolling and gliding abrasive wear. <span style="float: right;">= +</span>
DUR 350	E 1-UM-350	<b>After welding:</b> appr. 370 HB I layer on steel with C = 0,5 % : appr. 420 HB	●				Basic coated welding electrode for wear resistant surfacings on Mn-Cr-V-alloyed parts. <b>Recovery 125 %.</b> <span style="float: right;">= +/-</span>
A DUR 350	MSG 2-GZ-400	untreated: appr. 450 HB hardened 820 - 850 ° C/oil: appr. 62 HRC soft annealed 720° - 740° C: appr. 200 HB I layer on non-alloyed steel: appr. 350 HB		●			Copper coated wire for GMAW buildups on structural parts subjected on compression, impact and abrasion. Machinable by grinding possible.
AF DUR 350	MF 1-GF-350	<b>After welding:</b> appr. 370 HB I layer on steel with C = 0,5 % : appr. 420 HB				●	Flux cored wire suited for wear resistant buildups on parts which are subjected to high pressure in combination with rolling and gliding wear. <span style="float: right;">= +</span>



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UTP-Product	DIN 8555	Hardness	SMAW	GMAW	GTAW	FCAW	Application field
DUR 400	E 1-UM-400	<b>After welding:</b> appr. 450 HB 1 layer on steel with C = 0,5 % : ca. 50 HRC 1 layer on steel with C = 0,12 % : appr. 380 HB	●				Basic coated, high efficiency welding electrode which is used for surfacing parts of non-alloyed and low-alloyed steel and cast steel, subjected mainly to pressure and shock. <b>Recovery 200 %.</b> <input type="checkbox"/> = +/-
DUR 600	E 6-UM-60	<b>After welding:</b> 56 - 58 HRC soft annealed 780 - 820°C/oven: appr. 25 HRC hardened 1000 - 1050° C/oil: ca. 60 HRC 1 layer on high Mn-steel: ca. 22 HRC 2 layers on high Mn-steel: ca. 40 HRC	●				Basic coated electrode which is universally applicable for cladding on parts of steel, cast steel and high Mn-steel, subjected simultaneously to abrasion, impact and compression. <b>Recovery 115 %.</b> <input type="checkbox"/> = +/-
A DUR 600	W/MSG 6-GZ-60-S	<b>After welding:</b> 54 - 60 HRC soft annealed 800° C: appr.250 HB hardened 1000° C/oil: appr.62 HRC 1 layer on non-alloyed steel: appr.53 HRC	●	●			Copper coated wire, which is universally applicable for GTAW and GMAW buildups on structural parts subjected to high impact and medium abrasion.
AF DUR 600	MF 4-GF-55-ST	<b>After welding:</b> 55 - 58 HRC			●		Self-shielding open arc wire for highly wear resistant deposits. <input type="checkbox"/> = +
AF DUR 600 MP	MF 6-GF-60	<b>After welding:</b> 55 - 60 HRC			●		Gas-shielded, flux-cored wire for highly wear resistant, tough-hard surfacings. <input type="checkbox"/> = +



UTP-Product	DIN EN 14700 AWS A 5.13 A 5.21	Hardness				Application field
			SMAW	GTAW	FCAW	
<b>Celsit 701</b>	E Co3 E CoCr-C	at 20° C: 52 - 57 HRC at 600° C: appr. 42 HRC	●			CoCrW-welding consumables used for hardfacing of parts subjected to high abrasion combined with <span style="float: right;">= +/-</span>
<b>A Celsit 701 N</b>	R Co3 ER CoCr-C	54 - 56 HRC at 600° C: appr. 42 HRC at 800° C: appr. 34 HRC		●		corrosion and temperatures up to 900°C, <span style="float: right;">= -</span>
<b>AF Celsit 701</b>	T Co3 ~ER CCoCr-C	54 - 56 HRC at 600° C: appr. 42 HRC at 800° C: appr. 34 HRC			●	such as working parts in the chemical industry etc. <span style="float: right;">= +</span>
<b>Celsit 706</b>	E ZCo2 E CoCr-A	at 20° C: 40 - 42 HRC at 600° C: appr. 33 HRC	●			CoCrW-welding consumables used for high-grade hardfacing on parts subjected to a combination of erosion, <span style="float: right;">= +/-</span>
<b>A Celsit 706 V</b>	R ZCo2 ER CoCr-A	40 - 42 HRC at 600°: appr. 33 HRC		●		corrosion, cavitation, impact, pressure, <span style="float: right;">= -</span>
<b>AF Celsit 706</b>	T ZCo2 ER CCoCr-A	at 20° C: appr. 38 - 40 HRC at 600° C: appr. 32 HRC			●	abrasion and high temperatures up to 900°C. <span style="float: right;">= +</span>
<b>Celsit 712</b>	E Co3 E CoCr-B	at 20° C: 48 - 50 HRC at 600° C: appr. 40 HRC	●			CoCrW-welding consumables used for highly wear resistant hardfacing of parts subjected to a combination of pressure, <span style="float: right;">= +/-</span>
<b>A Celsit 712 SN</b>	R Co3 ~ERC CoCr-B	48 - 50 HRC 600° C: appr. 40 HRC		●		abrasion, corrosion, erosion, cavitation <span style="float: right;">= -</span>
<b>AF Celsit 712</b>	T Co3 ER CCoCr-B	at 20° C: 48 - 50 HRC at 600° C: appr. 37 HRC			●	and high heat up to 900°C. <span style="float: right;">= +</span>
<b>Celsit 721</b>	E Co1 E CoCr-E	at 20° C: 30 - 32 HRC work hardened: appr. 45 HRC	●			CoCrMo welding consumables used for crack resistant buildups on structural parts subjected to <span style="float: right;">= +/-</span>
<b>A Celsit 721</b>	R ZCo1 ER CoCr-E	at 20° C: 30 - 32 HRC work hardened: appr. 45 HRC at 600° C: appr. 240 HB		●		a combination of compression, impact, abrasion, corrosion <span style="float: right;">= -</span>
<b>AF Celsit 721</b>	T Co1 ER CCoCr-E	30 - 35 HRC work hardened: appr. 45 HRC			●	and high temperatures up to 900°C. <span style="float: right;">= +</span>
<b>Celsit V</b>	E ZCo2 E CoCr-A	40 - 42 HRC at 600° C: appr. 33 HRC	●			Basic coated electrode on cobalt-base used for high-grade hardfacing on parts subjected to a combination of impact, pressure, abrasion, erosion, corrosion, cavitation and high temperatures up to 900°C, core wire alloyed. <span style="float: right;">= +</span>

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UTP-Product	DIN 8555 AWS A 5.13	Hardness	SMAW	GMAW	GTAW	FCAW	Application field
73 G 2	E 3-UM-55-ST	<b>After welding:</b> 55 - 58 HRC	●				Welding consumables are, due to their high hardness, toughness and heat resistance, ideally suited <input type="checkbox"/> +/-
A 73 G 2	W/MSG 3-GZ-55-ST	untreated soft annealed 820° C hardened 1050° C/oil tempered 600° C I layer on mild steel		●	●		for buildups on parts subjected to severe friction, compression and moderate impact loads at elevated temperatures, such as
73 G 3	E 3-UM-45-T	<b>After welding:</b> appr. 45 - 50 HRC	●				hot shear blades, gate shear, forging <input type="checkbox"/> +/-
A 73 G 3	W/MSG 3-GZ-45-T	untreated soft annealed 780° C hardened 1030° C tempered 600° C I layer on mild steel		●	●		saddles, hammers, forging dies, AI-die cast moulds. Also used to good advantage for the
73 G 4	E 3-UM-40-PT	<b>After welding:</b> appr. 38 - 42 HRC	●				production of new cold and hot <input type="checkbox"/> +/-
A 73 G 4	W/MSG 3-GZ-40-T	<b>After welding:</b> 38 - 42 HRC		●	●		working tools.
690	E 4-UM-60-ST E Fe 5-B (mod)	<b>After welding:</b> appr. 62 HRC soft annealed 800 - 840° C: appr. 25 HRC hardened 1180° - 1240° C and tempered 2 x 550° C: appr. 64 - 66 HRC	●				Electrodes for building-up cutting tools. High abrasion, impact and pressure resistance up to 550C. Soft-annealing 800 - 840°C, hardening 1180 - 1240°C (oil cooling), tempering 540 - 560°C 2x 30 mins. <input type="checkbox"/> +/-
67 S	E 6-UM-60-S	<b>After welding:</b> 56 - 58 HRC soft annealed 820° C/oven: appr. 25 HRC hardened 850° C/oil 52 - 52 HRC 1000° C/oil 60 - 62 HRC	●				Low-hydrogen electrode for applications subjected to pressure, impact and abrasion. For cutting edges, cutting tools, hot shear blades. <input type="checkbox"/> <input type="checkbox"/> +/-
673	E 3-UM-60-ST	<b>After welding:</b> appr. 58 HRC	●				Hardfacing electrode for repair and manufacture of cold and hot working tools. Particularly suited for cutting tools. Temperature resistant up to to 550°C. <input type="checkbox"/> <input type="checkbox"/> +/-

## ■ Cast Iron

UTP-Product	DIN 8573 AWS A 5.15	Tensile strength R <sub>m</sub> MPa	Elon- gation A %	Hardness HB	SMAW	GMAW	GTAW	FCAW	GAS	Application Field
<b>8</b>	E Ni-BG 22 E Ni-Cl	appr. 460	appr. 25	180	●					Low-hydrogen grey cast iron cold welding electrode. = - / ~
<b>8 C</b>	E Ni-BG 22 E Ni-Cl	appr. 460	appr. 25	180	●					Filiable deposit and transition zones. Minimum amperage. = - / ~
<b>88 H</b>	E Ni-BG 22 E Ni-Cl	490	appr. 25	180	●					Splatterfree welding, in all positions. High elongation. = + / ~
<b>83 FN</b>	E NiFe-1BG 23 E NiFe-Cl	500	18	190	●					FeNi-electrode with Bimetal core wire for machinable cast iron cold welding. Crack and porosity free joints. High = + / ~
<b>85 FN</b>	E NiFe-1BG 23 E NiFe-Cl	500	18	appr. 220	●					mechanical properties. Particularly for malleable cast iron. = - / ~
<b>86 FN</b>	E NiFe-1BG 12 E NiFe-Cl	500	18	appr. 220	●					Wire for automatic processes.
<b>A 805 I Ti</b>	MSG NiFe2 ER NiFe-Cl	500	25	appr. 200		●	●			Welding rod, used for oxy-acetylene hot welding of cast iron qualities, when a weld deposit of the same colour and structure is required, use <b>UTP Flux 5</b> .
<b>5</b>	G FeC-1-G0 R-Cl			appr. 200					●	Ferro- nickel flux cored wire for MAG- welding on cast iron materials.
<b>AF 805 I Mn</b>	MF NiFe-1-S	600	25						●	



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## ■ High Alloy Steels

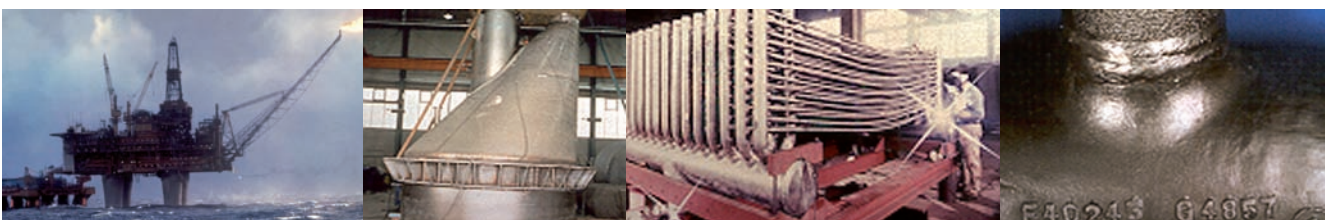
UTP-Product	AWS A 5.4 A 5.11 A 5.14	Tensile strength $R_m$ MPa	Elongation A %	Impact strength $K_V$ Joule	Hardness HB	SMAW	GMAW	GTAW	Application field
<b>63</b>	~ E 307 - 16	> 600	> 40	> 60	appr. 200	●			Austenitic welding consumables for joining, <span style="border: 1px solid black; padding: 2px;">= +/-</span>
<b>A 63</b>	ER 307 (mod.)	> 600	> 40		appr. 200		●	●	surfacing and cushioning layers prior
<b>630</b>	~ E 307 - 16	> 600	> 40	> 60	appr. 200	●			to hard facing <span style="border: 1px solid black; padding: 2px;">= +/-</span>
<b>65</b>	~ E 312- 16	> 800	22		appr. 240	●			Special ferritic-austenitic electrode with outstanding welding <span style="border: 1px solid black; padding: 2px;">= +/-</span>
<b>65 D</b>	~ E 312 - 16	> 800	> 20		appr. 260	●			characteristics. High mechanical properties. For joining and <span style="border: 1px solid black; padding: 2px;">= +/-</span>
<b>A 65I</b>	ER 312	> 650	> 25		appr. 240		●	●	surfacing. Universally applicable. High crack resistance.
<b>68 HH</b>	~ E NiCrFe-3 (mod.)	> 620	> 35	> 80	appr. 180	●			Fully austenitic, special electrode, stabilized, low-hydrogen type, for joining materials of different nature. Corrosion, heat and scale resistant up to temperatures of 1200°C. <span style="border: 1px solid black; padding: 2px;">= +</span>

## ■ High Temperature CrNi Alloys

UTP-Product	AWS A 5.4 A 5.14	Tensile strength $R_m$ MPa	Elongation A %	Impact strength $K_V$ Joule	SMAW	GMAW	GTAW	Application field
<b>68 H</b>	E 310-16	> 550	> 30	> 47	●			Welding consumables for high heat and scale resistant 25/20 CrNi- <span style="border: 1px solid black; padding: 2px;">= +/-</span>
<b>A 68 H</b>	~ ER 310 (Si)	650	30	60		●	●	steels up to 1200°C. Applications: Construction of furnaces pipe-work and fittings.
<b>2133 Mn</b>	-	> 600	> 25	> 70	●			Fully austenitic welding consumables for high temperature alloys. <span style="border: 1px solid black; padding: 2px;">= +</span>
<b>A2133 Mn</b>	-	600	25	70		●	●	Applications: Welding of cast pipes in the petrochemical industry.
<b>2535 Nb</b>	-	> 700	> 8		●			Welding consumables for joining and surfacing of heat-resisting base <span style="border: 1px solid black; padding: 2px;">= +</span>
<b>A 2535 Nb</b>	-	680	> 8			●	●	materials, particularly cast steel. Working temperature up to 1200°C.

## ■ Nickel und Nickel Alloys

UTP-Product	AWS A 5.11 A 5.14 A 5.34	Tensile strength R <sub>m</sub> MPa	Elong- ation A %	Impact strength K <sub>V</sub> Joule +20° C	SMAW	GMAW	GTAW	FCAW	Application field
068 HH	E NiCrFe-3 (mod.)	620	35	> 80	●				Special fully austenitic welding consumables for joining and <input type="checkbox"/> =+
A 068 HH	ER NiCr-3	> 640	> 35	> 200		●	●		surfacing. Corrosion proof and resistant against thermal shock, cold-tough.
AF 068 HH	E NiCr-3 T0-4	650	35	120				●	Not susceptible to embrittlement. <input type="checkbox"/> =+
80 M	E NiCu-7	> 450	> 30	> 80	●				Low-hydrogen NiCu-welding consumables for joining and <input type="checkbox"/> =+
A 80 M	ER NiCu-7	> 450	> 35	> 150		●	●		surfacing. High-grade plant engineering, chemical and petrochemical industries as well as desalination plants.
6222 Mo	E NiCrMo-3	> 760	> 30	> 75	●				Highly Ni-containing, low-hydrogen special welding consumables for <input type="checkbox"/> =+
A 6222 Mo	ER NiCrMo-3	> 720	> 30	> 100		●	●		welding high-strength, highly corrosion resistant Ni-base alloys
AF 6222 MoPW	E NiCrMo-3 T1-4	770	35	60				●	of similar nature. Suitable for welding 5 % and 9 % Ni steels. <input type="checkbox"/> =+
7015	E NiCrFe-3	> 620	> 35	> 80	●				Special low-hydrogen welding consumables with high nickel content and controlled Co-content for joining and surfacing in high-grade <input type="checkbox"/> =+
7015 Mo	E NiCrFe-2	> 620	> 35	> 80	●				plant engineering, chemical and petrochemical industry as well <input type="checkbox"/> =+
AF 7015	E NiCrFe-3 T0-4	610	35	170				●	as refrigeration engineering. <input type="checkbox"/> =+ <input type="checkbox"/> =-





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## ■ Austenitic Stainless Steels

UTP-Product	AWS A 5.4 A 5.9 A 5.22	Tensile strength R <sub>m</sub> MPa	Elongation A %	Impact strength K <sub>V</sub> Joule	SMAW	GMAW	GTAW	FCAW	Application field
<b>68 LC</b>	E 308 L-17	> 520	> 35	> 47	●				Welding consumables for stainless, acid-resisting CrNi-steels. For <span style="border: 1px solid black; padding: 2px;">= +/-</span>
<b>A 68 LC</b>	ER 308 L(Si)	600	35	100		●	●		operating temperatures up to 350°C. Easily
<b>AF 68 LC</b>	E 308 LT-1	560	35	70				●	polishable. <span style="border: 1px solid black; padding: 2px;">= +</span>
<b>68 Mo</b>	E 318-16	560	30	55	●				Welding consumables for stainless and acid-resisting CrNiMo-steels. <span style="border: 1px solid black; padding: 2px;">= +/-</span>
<b>A 68 Mo</b>	ER 318(Si)	680	35	100		●	●		Resists intercrystalline corrosion up to 400°C in conjunction with stabilized parent metal.
<b>68 MoLC</b>	E 316 L-17	560	30	60	●				Welding consumables for stainless and acid-resisting CrNiMo-steels. <span style="border: 1px solid black; padding: 2px;">= +/-</span>
<b>A 68 MoLC</b>	ER 316L(Si)	600	35	100		●	●		Resists intercrystalline corrosion up to 350°C in conjunction with low-carbon
<b>AF 68 MoLC</b>	E 316 -LT-1	560	35	75				●	parent metals of the same nature. UTP 68 MoLC good weldability on AC. <span style="border: 1px solid black; padding: 2px;">= +</span>
<b>6824 LC</b>	E 309 L-17	> 550	> 30	> 47	●				Welding consumables for corrosion and heat-resistant 22/12 <span style="border: 1px solid black; padding: 2px;">= +/-</span>
<b>A 6824 LC</b>	ER 309 L(Si)	590	30	140		●	●		CrNi-steels (unstabilized, low-carbon and stabilized) and for dissimilar metal joints.
<b>AF 6824 LC</b>	E 309 LT-1	600	35	60				●	For cladding non-alloyed and low-alloyed base materials. <span style="border: 1px solid black; padding: 2px;">= +</span>
<b>6824 MoLC</b>	E 309 MoL-17	670	> 25	> 47	●				Welding consumables for corrosion and heat-resistant <span style="border: 1px solid black; padding: 2px;">= +/-</span>
<b>A 6824 MoLC</b>	ER 309 MoL(Si)	700	> 25	> 25		●	●		CrNiMo-steels, dissimilar metal joints and cladding. Scale resistant up to 1050°C

## ■ Copper and Copper Alloys

UTP-Product	AWS A 5.6 A 5.7	Tensile strength $R_m$ MPa	Elongation A %	Hardness HB	Elec. conductivity $\frac{S \cdot m}{mm^2}$	SMAW	GMAW	GTAW	Application field
39	~ E Cu	> 200	> 35	appr. 60	ca. 20	●			Copper electrode, which yields a poreless, well deoxidized <span style="float: right;">= +</span>
A 381	ER Cu	appr. 200	30	appr. 60	15-20		●	●	crack-proof weld metal. For joining and surfacing of all commercial copper types.
34 N	E CuMnNiAl	appr. 650	5	appr. 220	ca. 3	●			Complex Al-bronze welding consumables with high mechanical <span style="float: right;">= +</span>
A 34 N	ER CuMnNiAl	650	5	220	3		●	●	values. Tough, poreless, crack and seawater resistant weld metal.
343	~ E CuAl-C			appr. 300		●			Basic coated hard bronze electrode against extreme gliding wear <span style="float: right;">= +</span>
387	E CuNi	> 390	> 30			●			Copper-nickel base welding consumables use for chemical <span style="float: right;">= +</span>
A 387	ER CuNi	> 360	> 30	120	3		●	●	apparatus construction, seawater evaporation plants, offshore technique.





# WELDING CONSUMABLES

## ■ Aluminium und Aluminium Alloys

UTP-Product	AWS A 5.3 A 5.10	Tensile strength $R_m$ MPa	Elongation A %	Melting range ° C	SMAW	GMAW	GTAW	GAS	Application field
485	E 4043	160	15	573 - 625	●				Aluminium welding consumables for joining <span style="float: right;">[= +]</span>
A 485	ER 4043	160	15	573 - 625		●	●		and surfacing for aluminium forging and
48	-	180	5	573 - 585	●				casting alloys of the AlSi AlMgSi, <span style="float: right;">[= +]</span>
A 48	ER 4047	170	8	573 - 585		●	●		AlSiMgCu types. Porosity-free tight seams.
49	E 3003	110	20	648 - 657	●				Aluminium electrode with special coating, seawater <span style="float: right;">[= +]</span>
A 495	ER 5356	250	25	575 - 633		●	●		resistant, for joining and surfacing Al-alloys of the types AlMn and AlMg up to 3%. Can be anodized.
4	-	100		590				●	Universal 12 % Si Aluminium brazing alloy. For vehicle engineering, vessel fabrication, lighting furniture, windows frames etc. Use Flux 4 Mg.

## ■ Silver Brazing / Solders

UTP-Product	DIN 8513	Tensile strength $R_m$ MPa	Working temperature ° C	Bare rod	Flux coated	Application field
306	L-Ag55Sn	430 (St50)	650	●		The high silver content (55%) of this alloy makes it an ideal choice for joining stainless steel and
306 M	L-Ag55Sn	430 (St50)	650		●	non-ferrous metals. High mechanical strength, excellent corrosion resistance and excellent capillary flow. Cadmium free. Use UTP Flux AGF, UTP AGX or UTP Flux 3 W

<b>3040</b>	L-Ag 40 Sn	450 (St50)	690	●	This product is used where good capillary is required, 40 % Ag. Joints of excellent appearance
<b>3040 M</b>	L-Ag 40 Sn	450 (St50)	690	●	can be achieved due to its superb capillary action. Suitable for ferrous and non-ferrous alloys.
<b>3040 MD</b>	L-Ag 40 Sn	450 (St50)	690	●	Cadmium free. Use UTP Flux AGF, UTP Flux AGX or UTP Flux 3 W
<b>7</b>	L-Ag 20	430 (St50)	810	●	These products are used where a high re-melt temperature is essential. The special analysis gives a
<b>7 M</b>	L-Ag 20	430 (St50)	810		brass colour deposit making it ideal for brass fabrication. Can also be used for joining steels and other non-ferrous alloys, 20 % Ag. Cadmium free. Use UTP Flux AGF, UTP Flux AGX or UTP Flux 3 W

## ■ Bronze Brazing

UTP-Product	DIN 8513	Tensile strength $R_m$ MPa	Working temperature °C	Bare rod	Flux coated	Application field
<b>I</b>	L-CuZn39Sn	420 (St50)	890	●		General purpose silicon bronze brazing alloy. Suitable for mild steel, cast iron and copper alloys. Excellent
<b>I M</b>	L-CuZn39Sn	420 (St50)	890		●	capillary action, excellent colour match on brass, excellent on galvanised steel. Small % of tin reduces
<b>I MR</b>	L-CuZn39Sn	420 (St50)	890		●	melt temperature and aids capillary action. No tin reduces in connection with HLS-B. Use UTP Flux HLS, UTP Flux HLP or UTP Flux HLS-B.
<b>6</b>	-	480 (S355)	900	●		High strength alloy containing nickel and silver for brazing joints on steel, malleable iron and nickel
<b>6 M</b>	-	480 (S355)	900		●	alloys. Extremely high mechanical properties. Fast flowing. Ideal for operating temperatures up to 500°C. Use UTP Flux HLS or UTP Flux HLP





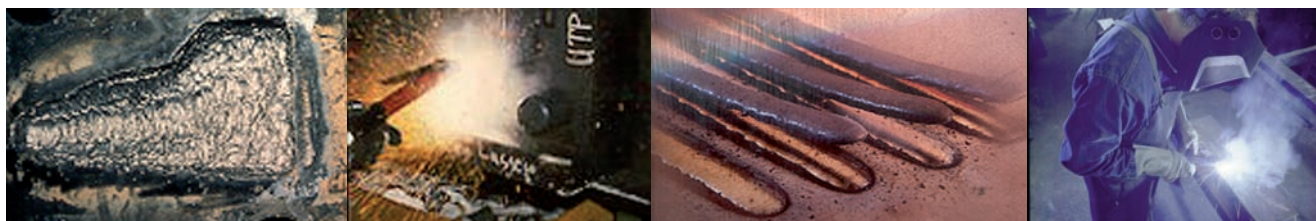
# WELDING CONSUMABLES

## ■ Low Alloyed and Medium Alloyed Steels

UTP-Product	AWS A 5.1	Tensile strengt R <sub>m</sub> MPa	Elongation A %	Impact strengt K <sub>v</sub> Joule	SMAW	Application field
611	~ E 6013	> 510	> 22	> 47		<ul style="list-style-type: none"> <li>Coated rutile-acid structural welding electrode for structural steels. Weldable in all positons except vertical down. Finely rippled deposit, which can be galvanized and enamelled. Easy slag removal. <span style="float: right;">= - / ~</span></li> </ul>
612	~ E 6013	> 510	> 22	> 47		<ul style="list-style-type: none"> <li>UTP 612 is a medium-strongly coated electrode for all kinds of steel structures and is particularly suited for welding jobs at poorly accessible points and badly prepared seams. UTP 612 welds well in all positions, in particular it is ideally suited for vetical-down welds. <span style="float: right;">= - / ~</span></li> </ul>
613 Kb	~ E 7018-1	> 510	> 25	> 120		<ul style="list-style-type: none"> <li>Low-hydrogen electrode for highly stressed joints on structural steels. Easily weldable. The weld metal is tough and resists cracks and aging. <b>Recovery 120 %</b>. <span style="float: right;">= +</span></li> </ul>
614 Kb	E 7016	> 510	> 22	> 80		<ul style="list-style-type: none"> <li>Unique double coating imparts super welding characteristics not found in any other LH electrode. <span style="float: right;">= + / ~</span></li> </ul>

## ■ Cutting and Goughing

UTP-Product	SMAW	Application field
82 AS		<ul style="list-style-type: none"> <li>This strongly coated chamfering electrode can be used on all steel grades with ferritic and austenitic structure, as well as cast iron, cast steel and all non-ferrous metals. It enables workpieces to be grooved out in a simple fashion. UTP 82 is also suitable for removing corroded metal layers and for fusion-cutting metallic materials. <span style="float: right;">= - / ~</span></li> </ul>





■ Place for notice

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## Sales Program

### Welding consumables:

Stick electrodes for welding nickel and nickel alloys  
Stick electrodes for hardfacing  
Special stick electrodes for welding different kinds of steel  
Stick electrodes for welding cast iron  
Stick electrodes for chamfering and cutting  
Stick electrodes for welding non-ferrous metals  
Stick electrodes for welding stainless, acid- and heat resistant steels  
Silver solders, brazing alloys, soft solders  
Fluxes  
Stick electrodes for welding low- and medium-alloyed steels  
MIG/MAG wires and TIG rods  
Flux-cored wires  
Submerged arc welding wires and fluxes

### Flame and Plasma spraying powders:

Metal powders  
EXOBOND powders  
UNIBOND powders  
HABOND powders  
PTA powders (Plasma)

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*If it can be welded – we know how.*



UTP is a certificated company.  
TÜV Certification according to DIN EN ISO 9001  
DIN EN ISO 14001