

## UF-S. WELDING OF STAINLESS, CORROSION-RESISTANT, AND REFRACTORY STEELS.

Neutral agglomerated chromium-compensating fluxing agent. The flux was developed for automatic and semiautomatic welding of stainless, corrosion-resistant, and refractory steels using a corresponding welding wire. It is also suitable for arc surfacing and strip overlay welding. The flux is designed for DC welding of single- and multipass welds with unlimited thickness of the welded parts. It possesses excellent technical welding characteristics. It is used in the chemical and petrochemical industries, for pressure vessels, chemical product storage and tanks, for solving tasks in the energy and nuclear industries, pulp and paper industry, civil engineering, transport machine building, etc.

Flux properties according to EN ISO 14174		Chemical composition, %										
SA CS 2 DC:		Total Oxides	CaO+MgO+SiO <sub>2</sub>						CaO+ MgO			
Boniszewski Basicity	1.0	%	At least 50						At least 15			
Bulk density, kg/dm <sup>3</sup>	1.0-1.3											
Grain size, mm	0,2-1,6											
Alloying	Chrome compensating											
Baking	275-325°C, 2 hour											

Chemical composition and mechanical properties of the weld metal															
Wire grade	Chemical composition											Mechanical properties			
	C	Mn	Si	Cr	P	Nb	S	Ni	Mo	Yield strenght R <sub>e</sub> [MPa]	Elongation A <sub>5</sub> [%]	Tensile strenght R <sub>m</sub> [MPa]	T [°C]	KCV [J/cm <sup>2</sup> ]	KCU [J/cm <sup>2</sup> ]
Sv-05Kh 20N9FBS	0.04	0.76	1.04	-	0.026	-	0.011	10.0	0.093	378	624	35	-20	120	-
Sv-07Kh 25N13	0.06	1.07	0.78	-	0.027	-	0.01	12.6	0.013	333	549	39	-40	112	-
													-50	101	-
													-60	-	140
													-20	127	-
S 19 12 3 Nb	0.035	1.2	0.35	18.5	≤0.030	0.3	≤0.020	12.0	2.6	440	600	42	-40	127	-
													-50	124	-
													-60	-	152
S 18 8 Mn	0.04	5.00	0.95	18.8	≤0.030	-	≤0.020	8.5	-	450	630	42	+20	125	-
													-60	113	-
													0	75	-
S 18 8 Mn	0.04	5.00	0.95	18.8	≤0.030	-	≤0.020	8.5	-	450	630	42	-20	69	-
													-60	56	-

## UF-K. NEUTRAL FLUX.

UF-K neutral agglomerated flux. Intended for mechanized arc welding and overlaying of carbon and low-alloy steels with a low-carbon and alloy welding wire. Exhibits excellent welding and processing properties for single-pass and multipass welds. Recommended for welding steel structures that are not subject to increased impact strength requirements.

Flux properties according to EN ISO 14174		Chemical composition, %						
SA AB 1 AC HS:		Total Oxides	Al <sub>2</sub> O <sub>3</sub> + CaO + MgO			Al <sub>2</sub> O <sub>3</sub>	CaF <sub>2</sub>	
Boniszewski Basicity	1.2	%	min 40			min 20	min 22	
Bulk density, kg/dm <sup>3</sup>	1.0-1.3							
Grain size, mm	0.25-2.0							
Alloying								
Baking	250-350°C, 2 hour							

Chemical composition and mechanical properties of the weld metal													
Wire grade	Steel grade	Chemical composition										Mechanical properties	
		C	Si	Mn	Cr	Ni	Mo	Nb	Yield strenght R <sub>e</sub> [MPa]	Elongation A <sub>5</sub> [%]	Tensile strenght R <sub>m</sub> [MPa]	T [°C]	KCV [J/cm <sup>2</sup> ]
S2Mo	-	0.06	0.50	1.20	0.15	0.20	-	-	≤450	≤500	≤20	-20	50
												-40	25

Flux Packing	
Packing	Net weight, kg
Bag	25
Big Bag	400 / 500 / 1000

## ANALOGUES. COMPARATIVE STUDY OF FLUXES.

The table below summarizes flux brands from foreign manufacturers that are alternatives to ChelPipe PJSC fluxes								
ChelPipe, Russia	PJSC Nikopol Ferroalloys Plant, PJSC Zaporizhskloflus, Ukraine	ESAB, Sweden	Lincoln Electric, USA	Oerlikon, Italy	Voestalpine Bohler Welding, Germany	Kobelco, Japan	Bavaria, Bavaria	China
UF-01	OSTs-45, AN-22, AN-43, AN-47	OK Flux 10.61 OK Flux 10.62 OK Flux 10.63	P240, FX8500, FX888	OP 122, OP 37 STC, OP 42TT, OP 120TT, OP 121 TT	UV 418 TT, UV 420 TTR, UV 421 TT, BB 202, BB 430, BB 24, Marathon 444	PFH-45, PFH-55S, PFI-50, G-50, MF-38	BF6.5	-
UF-02	AN-348, AN-60, AN-47	OK Flux 10.71	P230, P223, BF-1	OP 42TT, OP 120TT	BF 16, UV 309P, UV 420	PFH-42	BF4	ASF SJ101 FLUX-71, ASPWELD SJ 101, FP-101, FP-101G, FP-101Q, SJ101, UF-1071, BF-1
UF-03	AN-348A, OSTs-45, AN-22, AN-43, AN-47	OK Flux 10.81	760, 761, 780, 781, 860, 960	OP 100, 119, 143, 181, 155, 185, Uniflux D1	UV 305P, UV 306P, BB 33M	PFH-42	BF1, BF3	ASF SJ501 FLUX-81, ASPWELD SJ 501, FP-501T,
UF-N	AN-60, AN-20, AN-22, AN-26, AN-348, AN-72, FTs-18, ZhSN-5, ZhSN-6, ANK-18, ANK-19	OK Flux 10.33	802	-	Marathon 543	-	-	-
FSA ChTA	AN-60, AN-67B	OK Flux 10.71 OK Flux 10.72 OK Flux 10.74	P223 995N 998N	OP 132	UV 309P UV 310P	-	-	F-900
UF-S	AN-26P, AN-26S, AN-20S	OK Flux 10.92 OK Flux 10.93	P 2000 P 2000S	OP 33, OP 76, OP 70(74) Cr, OP 79	BB 202, Marathon 213	-	BF25	-
UF-K	AN-348, AN-348A, AN-348AM	-	-	-	-	-	-	-

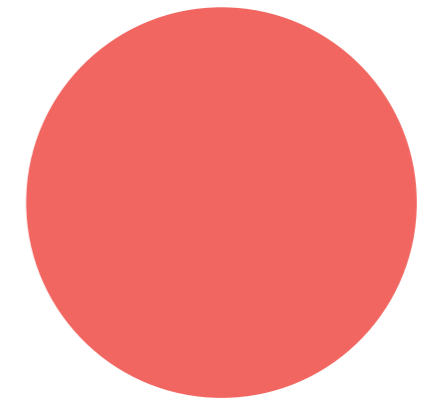


CHELPIPE GROUP

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## WELDING FLUX



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