FLUX UP LA02.5

Agglomerated Aluminate-Basic Welding Flux

Classification

ISO 14174 S A AB 1 67 AC H5

Description & Applications

Aluminate-Basic agglomerated Flux with high current-carrying capacity for submerged arc welding (SAW-process) of low-alloy structural steels, fine-grained steels and pipe steels and boiler steels. Metallurgical characteristic of this flux is medium Mn and Si pick up.
Flux UP LA02.5 is formulated to achieve very low diffusible hydrogen levels (<0.5ml/100g of weld metal deposit), easy slag detachability, even in narrow groove welds. Mainly used for single and multilayer welding of longitudinal and circumferential and fillet welds.

Could be used on D.C and A.C welding, using Single, Tandem, Twin or multi wire welding.

Wires recommended for

ISO 14171-A	***AWS A5.17***
S1	EL12
S2	EM12
S2Si	EM12K
S3Si	EH12K
S2Mo	EA2
S2NiCu	EG

Typical Chemical Composition (%)

$SiO_2 + TiO_2$	$Al_2O_3 + MnO$	CaO + MgO	CaF_2	Basicity according To Boniszewski
20	30	30	15	~1.7

Flux Properties

Density (kg / dm³)	Grain size ISO 14174	Current carrying capacity
1.1	2 - 16 ; Tyler 10x65 2 - 20 ; Tyler 8x65	Up to 1500A (AC or DC) using one wire

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All Weld Metal Typical Chemical analysis (%)

Wire	C	Si	Mn	Ni	Mo
S1	0.05-0.08	0.2-0.4	0.9-1.3		
S2	0.05-0.08	0.2-0.4	1.1-1.5		
S2Si	0.05-0.08	0.2-0.5	1.1-1.5		
S3Si	0.05-0.08	0.3-0.5	1.5-1.9		
S2Mo	0.04-0.08	0.2-0.4	1.1-1.5		0.5
S2NiCu	0.05-0.08	0.3-0.5	1.1-1.5	0.8	**Cu: 0.5**

All Weld Metal Typical Mechanical Properties

Wire		$R_{p0,2}$ (MPa)	R_m (MPa)	A (%)	KV (J) 0°C	-20°C	-30°C	-40°C
S1		>400	>500	>24	>70	>50		
S2	AW	>420	>500	>22	>100	>70	>47	>27
	S*	>400	>490	>22	>100	>70	>47	>27
S2Si	AW	>430	>500	>22	>100	>70	>47	>47
	S*	>400	>490	>22	>100	>70	>47	>47
S3Si	AW	>470	>560	>22	>100	>80	>60	>47
	S*	>400	>500	>22	>100	>80	>60	>27
S2Mo	AW	>490	>570	>20	>100	>80	>47	
	S**	>470	>550	>22	>100	>80	>47	
S2NiCu	AW	>540	>520	>22	>100	>70	>47	
	S**	>470	>550	>24	>100	>70	>47	

* After PWHT at 580°C/1h
** After PWHT at 620°C/15h

Storage Recycling and Drying

It is recommended to store and use the flux up to 1 year after delivery in dry storage rooms. Nevertheless, the flux can be used even if stored for more than one year, just requires the user to make a weldability test to check if all is well.
Drying conditions specific to the flux: 200 ± 50°C. Supplied in moisture proof packaging.