FLUX UP LA05

Semi-Basic Agglomerated Welding Flux

Classification

ISO 14174 : S A FB 1 67 AC H5

Description & Applications

Fluoride semi-basic multi-purpose flux for submerged arc welding (SAW process) of low-alloy structural steels, fine-grained steels and pipe steel qualities. The flux shows a low consumption rate.
Flux UP LA05 is formulated to achieve very low diffusible hydrogen levels max (5 ml/100g), oxygen levels of about 350 ppm and low nitrogen levels. This is also studied to have easy slag removal, even in narrow groove welds. Excellent toughness properties at low temperature.

Could be used on DC and AC welding, using single or tandem wire.

Wires recommended for

ISO 14171-A	***AWS A5.17***
S2	EM12
S2Si	EM12K
S3	EH10
S3Si	EH12K
S2Mo	EA2
S3Mo	EA4
S2Ni1	ENi1
ISO 26304-A	***AWS A5.23***
S3Ni1Mo	EF3

Typical Chemical Composition (%)

$SiO_2 + TiO_2$	$Al_2O_3 + MnO$	$CaO + MgO$	CaF_2	Basicity according to Boniszewski
20	30	30	17	~1.7

Flux Properties

Density (kg / dm^3)	Grain size ISO 14174	Current carrying capacity
0.95	2-20 ; Tyler 8x65	Up to 1000 A (AC or DC) using one wire

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All Weld Metal Typical Chemical analysis (%)

Wire	C	Si	Mn	Ni	Mo
S2	0.05-0.08	0.2-0.4	1.2-1.6		
S2Si	0.05-0.08	0.2-0.5	1.2-1.6		
S3	0.05-0.08	0.2-0.4	1.5-1.8		
S3Si	0.05-0.08	0.2-0.5	1.5-1.8		
S2Mo	0.05-0.08	0.2-0.5	1.2-1.6		0.4-0.6
S3Mo	0.05-0.08	0.2-0.5	1.5-1.8		0.4-0.6
S2Ni1	0.05-0.08	0.2-0.4	1.2-1.6	0.8	
S3Ni1Mo	0.05-0.08	0.2-0.5	1.5-1.8	0.8-1.0	0.4-0.6

All Weld Metal Typical Mechanical properties

Wire		$R_{p0,2}$ (MPa)	R_m (MPa)	A (%)	KV (J) RT	-20°C	-30°C	-40°C	-60°C
S2		>400	>510	>24	>120	>80	>60	>47	
S2Si		>400	>510	>24	>120	>80	>60	>47	
S3		>470	>560	>23	>100	>80	>60	>60	
S3Si		>470	>560	>23	>100	>80	>60	>60	
S2Mo	AW	>500	>590	>22	>90	>60	>47		
	620°C/15h	>480	>570	>22	>80	>70	>47		
S3Mo		>540	>630	>20	>80	>70	>47		
S2Ni1		>430	>520	>22	>100	>90		>70	>47
S3Ni1Mo		>610	>720	>20	>70	>60	>47	-	-

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.