



WBSAWF-B4 SUBMERGED ARC FLUX

Classifications	AWS A5.17: F7 AP8 – EH12K AWS A5.23: F8 AP4-EA2-A2 F8 AP8-EG-G F8P2-EB2-B2 F8P4-EB3-B3	EN 14174: SA FB 1 55 AC H5 EN 14171: S 46 6 FB S3Si S 50 4 FB S2Mo S 50 6 FB S0								
Wire Specifications	WBSD3: AWS A5.23 F7A8–EG-G, F7P8-EG-G WBSD3 1Ni 1/4Mo: AWS A5.23: F8A10-EG-G, F8P10-EG-G WBSD3 1Ni 1/2Mo: AWS A5.23: F9A6-EG-G, F9P6-EG-G WBSD3Mo: AWS A5.23 F8A6-EG-A4, F8P6-EGA4 WBSD2 1NiCrMo: AWS A5.23: F1-P4-EG-G WBS2-1¼Cr1/2Mo: AWS A5.23: F9P0-EB2-B2 WBS2-2 1/2Cr1Mo: AWS A5.23: F9P2-EG-B3									
Product Description	WBSAWF-B4 is an agglomerated fluoride-basic sub arc flux.									
Applications	<p>WBSAWF-B4 is an agglomerated basic flux most suited to weld high-tensile, fine-grain steels as well as steels which require high toughness at sub-zero temperatures. As a result, the flux has been used where CTOD is a requirement.</p> <p>The neutral behaviour of WBSAWF-B4 in terms of silicon and manganese pick-up and burn off is suited for WBS3-SAW & WBNiMo type wires.</p> <p>The flux has been developed for welding with twin or multi-wire processes.</p> <p>The flux can be welded on DC and AC. Damp flux should be re-dried @ 300-350°C for 1 hour, prior to use.</p> <p>Basicity to Boniszewski: ~2.9 Packed in 25Kg plastic bags</p>									
Main Constituents of flux	<table border="1"> <tr> <td>SiO₂ + TiO₂</td> <td>CaO + MgO</td> <td>Al₂O₃ + MnO</td> <td>CaF₂</td> </tr> <tr> <td>15%</td> <td>40%</td> <td>20%</td> <td>25%</td> </tr> </table>	SiO₂ + TiO₂	CaO + MgO	Al₂O₃ + MnO	CaF₂	15%	40%	20%	25%	
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All-Weld Chemical Analysis	C	Si	Mn	Mo	Cr	Ni
WBS2	0.05-0.08	0.15-0.25	0.70-1.00	-	-	-
WBS3	0.05-0.08	0.25-0.40	1.30-1.50	-	-	-
WBSD3 1Ni 1/4Mo	0.06-0.09	0.25-0.40	1.30-1.50	0.10-0.25	-	0.70-1.00
WBSD3 1Ni 1/2Mo	0.06-0.09	0.25-0.40	1.30-1.50	0.45-0.65	-	0.70-1.00
WBSD3Mo	0.06-0.09	0.20-0.40	1.20-1.40	0.35-0.55	-	-
WBSD21NiCrMo	0.04-0.06	0.35-0.55	1.50-1.70	0.45-0.65	0.90-1.10	0.80-1.00
WBS2-1¼Cr1/2Mo	0.05-0.10	0.20-0.40	0.50-1.00	0.45-0.65	1.10-1.30	-
WBS2-2 1/2Cr1Mo	0.08-0.12	0.20-0.40	0.50-1.00	0.90-1.20	2.10-2.50	-

Mechanical Test Properties	PWHT	UTS (N/mm ²)	Yield (N/mm ²)	EI (%)	C-V (J)	C-V (J)
WBS2	As welded	450-550	>330	>28	>30 (-40°C)	-
WBS3	As welded	540-640	>450	>25	>100(-40°C)	>70 (60°C)
WBSD3 1Ni 1/4Mo	As welded	580-680	>510	>20	>80 (-40°C)	-
WBSD3 1Ni 1/2Mo	620°C/2Hrs	690-720	>620	>20	>48 (-62°C)	-
WBSD3Mo	620°C/2Hrs	620-660	>550	>24	>90 (-50°C)	-
WBSD21NiCrMo	620°C/2Hrs	690-730	>580	>20	>70 (-30°C)	-
WBS2-1¼Cr1/2Mo	620°C/2Hrs	650-720	>550	>22	>60 (-29°C)	-
WBS2-2 1/2Cr1Mo	691°C/2Hrs	600-660	>500	>22	>50 (-29°C)	-