

## AA B690

CATEGORY	FCAW Flux-Cored																																	
TYPE	Seamless, high-strength flux-cored wire for M21 with basic slag																																	
APPLICATIONS	Crane-, plant-, craft- and steel construction, pipe work, foundries																																	
PROPERTIES	Absolutely crack resistant weld metal conditioned by the high-basic slag in combination with extreme low hydrogen content. Therefore, suitable for the economic processing of high-strength, low temperature fine-grained structural steels with R p0,2 >690 N/mm. X-ray-proof seams with low spatter loss. Stable, mechanical property values of the weld metal also at high heat input up to 18 kJ/cm																																	
CLASSIFICATION	AWS	5.29: E110T5-K4M H4 5.29 M: E760T5-K4M H4																																
	EN ISO	18276-A: T 69 6 Mn2NiCrMo B M 3 H5																																
SUITABLE FOR	StE 690.7 TM, L690M, A517, StE 690V, S690QL, 690 VA, S690G1QL1, weldox 700, dilimax, Naxtra 70, S690, S620QI1, S690QL1, S600MC, S700MC, Naxtra 63, Naxtra 70, Optim 700 mc plus, TStE620, TStE690, Weldox 500, Weldox 700, Hardox, L480 - L550, X65, X80, X90, X100, Hardox 400, XAR 400, Dilidur 400, 20MnCr65, 28CrMn43, Oceanfit 100, Oceanfit 690, 4130, 4140																																	
APPROVALS	CE approved																																	
WELDING POSITIONS:																																		
WELD METAL ANALYSIS % (TYPICAL VALUES)	<table border="1"> <thead> <tr> <th>C</th> <th>Mn</th> <th>Si</th> <th>Cr</th> <th>Ni</th> <th>Mo</th> <th>P</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0,05</td> <td>1,6</td> <td>0,4</td> <td>0,5</td> <td>2,2</td> <td>0,5</td> <td>&lt;0.015</td> <td>&lt;0.015</td> </tr> </tbody> </table>							C	Mn	Si	Cr	Ni	Mo	P	S	0,05	1,6	0,4	0,5	2,2	0,5	<0.015	<0.015											
C	Mn	Si	Cr	Ni	Mo	P	S																											
0,05	1,6	0,4	0,5	2,2	0,5	<0.015	<0.015																											
MECHANICAL PROPERTIES	<table border="1"> <thead> <tr> <th rowspan="2">Heat Treatment</th> <th rowspan="2">R<sub>p0,2</sub> (N/mm<sup>2</sup>)</th> <th rowspan="2">R<sub>m</sub> (N/mm<sup>2</sup>)</th> <th rowspan="2">A<sub>5</sub> (%)</th> <th colspan="3">Impact Energy (J) ISO-V</th> <th rowspan="2">Hardness HRc / HV</th> </tr> <tr> <th>-20°C</th> <th>-40°C</th> <th>-60°C</th> </tr> </thead> <tbody> <tr> <td>AW and SR</td> <td>&gt;690</td> <td>770-900</td> <td>&gt;17</td> <td>&gt;80</td> <td>&gt;80</td> <td>&gt;69</td> <td></td> </tr> <tr> <td>PWHT 660°C/90 min</td> <td>&gt;720</td> <td>&gt;620</td> <td>&gt;21</td> <td>&gt;80</td> <td>&gt;80</td> <td>&gt;47</td> <td></td> </tr> </tbody> </table>							Heat Treatment	R <sub>p0,2</sub> (N/mm <sup>2</sup> )	R <sub>m</sub> (N/mm <sup>2</sup> )	A <sub>5</sub> (%)	Impact Energy (J) ISO-V			Hardness HRc / HV	-20°C	-40°C	-60°C	AW and SR	>690	770-900	>17	>80	>80	>69		PWHT 660°C/90 min	>720	>620	>21	>80	>80	>47	
Heat Treatment	R <sub>p0,2</sub> (N/mm <sup>2</sup> )	R <sub>m</sub> (N/mm <sup>2</sup> )	A <sub>5</sub> (%)	Impact Energy (J) ISO-V			Hardness HRc / HV																											
				-20°C	-40°C	-60°C																												
AW and SR	>690	770-900	>17	>80	>80	>69																												
PWHT 660°C/90 min	>720	>620	>21	>80	>80	>47																												
AW: as welded / SR: stress relieved 580-620°C/2hr																																		
WELDING PARAMETERS / PACKING	<table border="1"> <thead> <tr> <th colspan="3">Welding Parameters</th> <th colspan="3">Packing</th> </tr> <tr> <th>D (mm)</th> <th>Voltage (V)</th> <th>Current (A) DC+</th> <th>spool type</th> <th>kg / spool / drum</th> <th>kg / pallet</th> </tr> </thead> <tbody> <tr> <td>1,2</td> <td>23-26</td> <td>180-240</td> <td>D-200 / K-300 / Drum</td> <td>5 / 16 / 300</td> <td>1000 / 1024 / 600</td> </tr> <tr> <td>1,6</td> <td>24-28</td> <td>200-300</td> <td>D-200 / K-300 / Drum</td> <td>5 / 16 / 300</td> <td>1000 / 1024 / 600</td> </tr> </tbody> </table>							Welding Parameters			Packing			D (mm)	Voltage (V)	Current (A) DC+	spool type	kg / spool / drum	kg / pallet	1,2	23-26	180-240	D-200 / K-300 / Drum	5 / 16 / 300	1000 / 1024 / 600	1,6	24-28	200-300	D-200 / K-300 / Drum	5 / 16 / 300	1000 / 1024 / 600			
Welding Parameters			Packing																															
D (mm)	Voltage (V)	Current (A) DC+	spool type	kg / spool / drum	kg / pallet																													
1,2	23-26	180-240	D-200 / K-300 / Drum	5 / 16 / 300	1000 / 1024 / 600																													
1,6	24-28	200-300	D-200 / K-300 / Drum	5 / 16 / 300	1000 / 1024 / 600																													
REDRYING TEMPERATURE	Not required																																	
GAS ACC. EN ISO 14175:	M21																																	