

FL CS165

CATEGORY	SAW Arc Submerged																																			
TYPE	Fused flux with very low hydrogen content for SAW welding.																																			
APPLICATIONS	Boiler works, pipes, ship building, structural steel works, tanks and pressure vessels, offshore applications etc..																																			
PROPERTIES	<p>Glassy melted (fused) low- manganese metallurgical neutral flux. Suitable for direct- and alternating current welding at high current up to 1000 Ampere per wire and 1400 Ampere for multiple wires. FL CS 165 ensures high toughness properties of the weld metal and is suitable to weld plates of unlimited thickness.</p> <p>Basicity: ~1,3 (according to boniszewski)</p> <p>Grain size: 0,32÷1,6 mm</p> <p>Density: 1,4÷1,7 kg/dm³</p>																																			
CLASSIFICATION	EN ISO 14174: SF CS 1 65 AC H5																																			
SUITABLE FOR	Unalloyed steels: St 33 – St 52, Ship building: A, E, AH, EH , Boiler steels: HI-HIII, 17Mn4, 19Mn5, Pipe steels: St 37.0/4 – St 52.0/4, Fine-grain steels:StE 255 – StE 420, X70																																			
APPROVALS	CE approved																																			
WELDING POSITIONS:																																				
COMPOSITION BY WEIGHT %	<table border="1"> <tr> <td>CaO + MgO + SiO₂</td> <td>CaO + MgO</td> </tr> <tr> <td>>55%</td> <td>>15%</td> </tr> </table>	CaO + MgO + SiO ₂	CaO + MgO	>55%	>15%																															
CaO + MgO + SiO ₂	CaO + MgO																																			
>55%	>15%																																			
MECHANICAL PROPERTIES	<table border="1"> <thead> <tr> <th rowspan="2">As welded with wire</th> <th rowspan="2">R_{p0,2} (N/mm²)</th> <th rowspan="2">R_m (N/mm²)</th> <th rowspan="2">A₅ (%)</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>S2(Si)</td> <td>>420</td> <td>>500</td> <td>32</td> <td>120</td> <td></td> <td></td> <td></td> </tr> <tr> <td>S3Si</td> <td>>450</td> <td>>530</td> <td>32</td> <td></td> <td>>47</td> <td></td> <td></td> </tr> <tr> <td>SACW 500</td> <td>>460</td> <td>>550</td> <td>29</td> <td></td> <td>>100</td> <td></td> <td></td> </tr> </tbody> </table>	As welded with wire	R _{p0,2} (N/mm ²)	R _m (N/mm ²)	A ₅ (%)	Impact Energy (J) ISO-V			Hardness HRc / HV	-20°C	-40°C	-60°C	S2(Si)	>420	>500	32	120				S3Si	>450	>530	32		>47			SACW 500	>460	>550	29		>100		
As welded with wire	R _{p0,2} (N/mm ²)					R _m (N/mm ²)	A ₅ (%)	Impact Energy (J) ISO-V			Hardness HRc / HV																									
		-20°C	-40°C	-60°C																																
S2(Si)	>420	>500	32	120																																
S3Si	>450	>530	32		>47																															
SACW 500	>460	>550	29		>100																															
REDRYING TEMPERATURE	Usually not necessary. (when became wet, 2hr/200°C)																																			
PACKING	In paper / plastic bags of 25 kg / 30 kg buckets and 1000 kg big bags.																																			