

307 Si

CATEGORY	GMAW-GTAW Solid wires																																							
TYPE	Solid welding wire for dissimilar welding and buffer layers																																							
APPLICATIONS	Buffer layers before hardfacing, dissimilar welding between steel and stainless steel, armor plate, exhaust systems (type 409, 304), high Manganese austenitic steel, heterogeneous welding, difficult to weld steels etc.																																							
PROPERTIES	Corrosion resistance is equivalent to type 304, high mechanical properties and good weldability, work hardening and cold-tough to -110°C.																																							
CLASSIFICATION	AWS	A 5.9: ER 307																																						
	EN ISO	14343-A: G 18 8 MnSi 14343-B: SSZ307																																						
	DIN: W.Nr.	1.4370																																						
	DIN	8556: SG X15CrNiMn 18 8																																						
SUITABLE FOR	Dissimilar welding between steel and stainless steel, armor plate, exhaust systems (type 409, 304), high Manganese austenitic steel, difficult to weld steels such as: 42CrMo4, C45, 42MnV7, tool steels, 1.3401, X120Mn12 etc.																																							
APPROVALS	TUV (12385.00) , DB (43.206.01) CE approved																																							
WELDING POSITIONS:																																								
TYPICAL ALL WELD METAL ANALYSIS (M12)	<table border="1"> <thead> <tr> <th>C</th> <th>Mn</th> <th>Si</th> <th>Cr</th> <th>Ni</th> <th>P</th> <th>S</th> </tr> </thead> <tbody> <tr> <td><0.12</td> <td>6.5</td> <td>0.6-1.0</td> <td>18.5</td> <td>8.5</td> <td><0.025</td> <td><0.025</td> </tr> </tbody> </table>						C	Mn	Si	Cr	Ni	P	S	<0.12	6.5	0.6-1.0	18.5	8.5	<0.025	<0.025																				
C	Mn	Si	Cr	Ni	P	S																																		
<0.12	6.5	0.6-1.0	18.5	8.5	<0.025	<0.025																																		
MECHANICAL PROPERTIES	<table border="1"> <thead> <tr> <th rowspan="2">Heat treatment</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>+20C</th> <th>-40°C</th> <th>-60C</th> </tr> </thead> <tbody> <tr> <td>AW</td> <td>>360</td> <td>>600</td> <td>40</td> <td>>100</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						Heat treatment	R _{P0,2} (N/mm ²)	R _m (N/mm ²)	A ₅ (%)	Impact energy (J) ISO-V			Hardness HRc / HV	+20C	-40°C	-60C	AW	>360	>600	40	>100																		
Heat treatment	R _{P0,2} (N/mm ²)	R _m (N/mm ²)	A ₅ (%)	Impact energy (J) ISO-V							Hardness HRc / HV																													
				+20C	-40°C	-60C																																		
AW	>360	>600	40	>100																																				
AW: as welded																																								
WELDING PARAMETERS / PACKING	<table border="1"> <thead> <tr> <th rowspan="2">D (mm)</th> <th colspan="2">Welding Parameters</th> <th rowspan="2">spool type</th> <th colspan="2">Packing</th> </tr> <tr> <th>Voltage (V)</th> <th>Current (A) DC+</th> <th>kg / pack</th> <th>kg / pallet</th> </tr> </thead> <tbody> <tr> <td>0.8</td> <td>15-24</td> <td>55-160</td> <td>D-200 / K-300 / POP</td> <td>5 / 15 / 250</td> <td>1000 / 1080 / 1000</td> </tr> <tr> <td>1.0</td> <td>15-28</td> <td>80-240</td> <td>D-200 / K-300 / POP</td> <td>5 / 15 / 250</td> <td>1000 / 1080 / 1000</td> </tr> <tr> <td>1.2</td> <td>15-29</td> <td>100-300</td> <td>D-200 / K-300 / POP</td> <td>5 / 15 / 250</td> <td>1000 / 1080 / 1000</td> </tr> <tr> <td>1.6</td> <td>23-31</td> <td>230-375</td> <td>D-200 / K-300 / POP</td> <td>5 / 15 / 250</td> <td>1000 / 1080 / 1000</td> </tr> </tbody> </table>						D (mm)	Welding Parameters		spool type	Packing		Voltage (V)	Current (A) DC+	kg / pack	kg / pallet	0.8	15-24	55-160	D-200 / K-300 / POP	5 / 15 / 250	1000 / 1080 / 1000	1.0	15-28	80-240	D-200 / K-300 / POP	5 / 15 / 250	1000 / 1080 / 1000	1.2	15-29	100-300	D-200 / K-300 / POP	5 / 15 / 250	1000 / 1080 / 1000	1.6	23-31	230-375	D-200 / K-300 / POP	5 / 15 / 250	1000 / 1080 / 1000
D (mm)	Welding Parameters		spool type	Packing																																				
	Voltage (V)	Current (A) DC+		kg / pack	kg / pallet																																			
0.8	15-24	55-160	D-200 / K-300 / POP	5 / 15 / 250	1000 / 1080 / 1000																																			
1.0	15-28	80-240	D-200 / K-300 / POP	5 / 15 / 250	1000 / 1080 / 1000																																			
1.2	15-29	100-300	D-200 / K-300 / POP	5 / 15 / 250	1000 / 1080 / 1000																																			
1.6	23-31	230-375	D-200 / K-300 / POP	5 / 15 / 250	1000 / 1080 / 1000																																			
REDRYING TEMPERATURE	not required																																							
GAS ACC. EN ISO 14175:	M11, M12, M13																																							