

E CuMn

CATEGORY	SMAW Stick Electrodes																																								
TYPE	Copper based electrode developed for joining and cladding.																																								
APPLICATIONS	E CuMn is suitable for welding and overlaying copper and copper alloys, Cast Iron and steel.																																								
PROPERTIES	Ductile welding deposit with high conductivity and corrosion resistance. The weld deposit is free from porosity and offers similar strength as most commercial copper grades. Thicker sections than 5 mm should be preheated upto approximately 500°C.																																								
CLASSIFICATION	AWS	A 5.6: ~E Cu UNS: ~W60189																																							
	EN ISO	no standard																																							
	DIN: W.Nr.	~2.1363																																							
	DIN	1733: EL-CuMn2																																							
SUITABLE FOR	Cladding steel, grey cast iron, copper, copper alloys and dissimilar welding. W.Nr: 2.0040, 2.0070, 2.0076, 2.0090. UNS: C10100, C11000, C10300, C11020, C12200																																								
APPROVALS	CE approved																																								
WELDING POSITIONS:																																									
WELD METAL ANALYSIS %	<table border="1"> <thead> <tr> <th>Cu</th> <th>Si</th> <th>Mn</th> <th>Fe</th> <th>Sn</th> </tr> </thead> <tbody> <tr> <td>rem</td> <td>0.25</td> <td>2.7</td> <td>0.10</td> <td>0.7</td> </tr> </tbody> </table>					Cu	Si	Mn	Fe	Sn	rem	0.25	2.7	0.10	0.7																										
Cu	Si	Mn	Fe	Sn																																					
rem	0.25	2.7	0.10	0.7																																					
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 HB</th> </tr> <tr> <th>-20°C</th> <th>-40°C</th> <th>-60°C</th> </tr> </thead> <tbody> <tr> <td>AW</td> <td></td> <td>205</td> <td>35</td> <td></td> <td></td> <td></td> <td>100</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 HB	-20°C	-40°C	-60°C	AW		205	35				100																	
Heat Treatment	R _{p0,2} (N/mm ²)	R _m (N/mm ²)	A ₅ (%)	Impact Energy (J) ISO-V						Hardness HB																															
				-20°C	-40°C	-60°C																																			
AW		205	35				100																																		
AW: as welded																																									
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>Length (mm)</th> <th>Current (A)</th> <th>kg / can</th> <th>kg / 6 pack</th> <th>kg / 1000</th> </tr> </thead> <tbody> <tr> <td>2.5</td> <td>350</td> <td>60-85</td> <td>3.5</td> <td>21</td> <td>15.8</td> </tr> <tr> <td>3.2</td> <td>350</td> <td>90-120</td> <td>3.5</td> <td>21</td> <td>31.9</td> </tr> <tr> <td>4.0</td> <td>350</td> <td>120-145</td> <td>3.5</td> <td>21</td> <td>47.7</td> </tr> <tr> <td>5.0</td> <td>350</td> <td>130-190</td> <td>3.5</td> <td>21</td> <td>85.7</td> </tr> </tbody> </table>					Welding Parameters			Packing			D (mm)	Length (mm)	Current (A)	kg / can	kg / 6 pack	kg / 1000	2.5	350	60-85	3.5	21	15.8	3.2	350	90-120	3.5	21	31.9	4.0	350	120-145	3.5	21	47.7	5.0	350	130-190	3.5	21	85.7
Welding Parameters			Packing																																						
D (mm)	Length (mm)	Current (A)	kg / can	kg / 6 pack	kg / 1000																																				
2.5	350	60-85	3.5	21	15.8																																				
3.2	350	90-120	3.5	21	31.9																																				
4.0	350	120-145	3.5	21	47.7																																				
5.0	350	130-190	3.5	21	85.7																																				
REDRYING TEMPERATURE	150°C / 2hr																																								