



**UNIWELED IND. DE ELETRODOS LTDA**

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**COMMERCIAL NAME:** ESSEN HM 31

**Review:** 01

**STANDARD:** AWS A5.1: 2012 E 6010 / ASME SFA5.1 E 6010 Edition 2015

**Date:** 07/2016

Chemical characteristic of the deposited metal	C	Mn	Si	P	S	Ni	Cr	Mo	V
	0.20% Max.	1.20% Max.	1.00% Max.	ND	ND	0.30% Max.	0.20% Max.	0.30% Max.	0.08% Max.

<b>APPLICATION FIELD</b>	Special carbon steel electrode with cellulose coating for welding which require high penetration welding in any position, especially for root welding. With its high penetration characteristics, this electrode is suitable for pipe welding in pipeline construction, pipelines, pipelines and pipes in general, the metal construction, shipbuilding, bridges, platforms, tanks, galvanized sheets, etc.															
<b>TECHNICAL CHARACTERISTICS</b>	For root welding, circular welds of pipelines for oil or natural gas, tenacious deposits, spaced edges in proper application, welding positions, especially the descending vertical energetic fusion little slag, good looking deposit.															
<b>MECHANICAL PROPERTIES</b>	<b>Tensile strength:</b> 430 MPa <b>Yield strength:</b> 330 MPa <b>Stretching:</b> 22% <b>Impact resistance (Charpy V Joule):</b> 27 J at -30 ° C min															
<b>OPERATIONAL CHARACTERISTICS</b>	<b>welding position:</b> All the positions															
	<b>Type of current:</b> AC, DC +.															
	<table border="1"> <thead> <tr> <th>Diameter (mm)</th> <th>Ø X 350 2.50</th> <th>Ø X 350 3.25</th> <th>Ø X 450 4.00</th> <th>Ø X 450 5.00</th> </tr> </thead> <tbody> <tr> <td><b>Amps (A)</b></td> <td>70 to 95</td> <td>100 to 130</td> <td>140-170</td> <td>180-220</td> </tr> <tr> <td><b>Packaging (kg)</b></td> <td>15</td> <td>15</td> <td>25</td> <td>25</td> </tr> </tbody> </table>	Diameter (mm)	Ø X 350 2.50	Ø X 350 3.25	Ø X 450 4.00	Ø X 450 5.00	<b>Amps (A)</b>	70 to 95	100 to 130	140-170	180-220	<b>Packaging (kg)</b>	15	15	25	25
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<b>WELDING TECHNIQUE</b>	It is important before application of the electrode, a rigorous cleaning in the welding area to remove all traces of contamination. If cleaning is impractical or infeasible preparing the joint, with this electrode can be still good penetration and quality joint due to the thin cellulosic coating.															