



**UNIWEELD IND. DE ELETRODOS LTDA**

Address: 1788, XV de Dezembro Avenue – Tanque do Moinho  
 Zip Code: 12.910-691 – Bragança Paulista – São Paulo – Brazil  
 Phone: (+55 11) 4035-8877  
 E-mail: [uniweld@uniweld.com.br](mailto:uniweld@uniweld.com.br)  
 Website: [www.uniweld.com.br](http://www.uniweld.com.br)

**Contact Uniweld**

**(+55 11) 4035-8877**

**COMMERCIAL NAME: HM 31 S**

**STANDARD: AWS A5.1: 2012 E 6011 / ASME SFA5.1 E 6011 Edition 2015**

**Review: 01**

**Date: 07/2020**

Chemical characteristic of the deposited metal	C	Mn	Si	P	S	Ni	Cr	Mo	V
	0,20% Max.	1,20% Max.	1,00% Max.	N.S	N.S	0,30% Max.	0,20% Max.	0,30% Max.	0,08% Max.

<b>APPLICATION FIELD</b>	Special carbon steel electrode, with cellulosic coating for welding where high penetration in any position is required. Mainly used for root welding. With its high penetration characteristics, this electrode is indicated for welding pipes in the construction of oil and gas pipelines, pipelines, pressure vessels, silos, general piping, agricultural implements, bridges, viaducts, tanks, galvanized sheets, etc.															
<b>TECHNICAL CHARACTERISTICS</b>	Special high penetration cellulosic coating electrode, weldable in all positions. Produces smooth cords and easy slag removal.															
<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 positions															
	<b>Type of Current:</b> AC, DC															
	<table border="1"> <thead> <tr> <th>Diameter (mm)</th> <th>Ø 2,50 X 350</th> <th>Ø 3,25 X 350</th> <th>Ø 4,00 X 450</th> <th>Ø 5,00 X 450</th> </tr> </thead> <tbody> <tr> <td><b>Amperage (A)</b></td> <td>40 a 80</td> <td>75 a 125</td> <td>110 a 170</td> <td>140 a 240</td> </tr> <tr> <td><b>Packing (kg)</b></td> <td>15</td> <td>15</td> <td>25</td> <td>25</td> </tr> </tbody> </table>	Diameter (mm)	Ø 2,50 X 350	Ø 3,25 X 350	Ø 4,00 X 450	Ø 5,00 X 450	<b>Amperage (A)</b>	40 a 80	75 a 125	110 a 170	140 a 240	<b>Packing (kg)</b>	15	15	25	25
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<b>WELDING TECHNIQUE</b>	Prepare the area to be welded by eliminating surface contamination such as oils, greases and fats, removing fatigued material, cracks, pores and cracks, always obeying the amperage indicated for each diameter, keeping a short and inclined arc at 75 ° in the direction of the weld. Due to the thin cellulosic coating, good joint quality and penetration are achieved even if cleaning is impractical.															