


| CATEGORY | GMAW Solid wires | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|-------------------------|----------------------|-------------------------|--------------------|-------|--------------------|--------------------|--------------------|----------------|-------------------------|---------|--------|----------|-------------|------------|-------------------|-------------|-----|-------|-------|---------------|--------|-------------|-----|-------|--------|----------------------|--------------|--------------------|-----|-------|--------|----------------------|--------------|--------------------|-----|-------|---------|----------------------|--------------|--------------------|
| TYPE | Special Mag wire with desoxidation additions for improved welding properties. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| APPLICATIONS | Recommended for applications that require high purity of the weld metal. Ideal for diluted, rusty, painted or galvanized steel plates in maintenance and repair. Car restoration, body shops, frames and overhaul work. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROPERTIES | Low spatter formation, excelent flowing and desoxidation properties due to the addition of Zr, Ti and Aluminium. SG Titan is a bronzed wire to offer excellent feeding properties with standard steel liners. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLASSIFICATION | AWS | A 5.18: ER 70S-2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | EN ISO | 14341-A: G 46 A M21 2Ti | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | F-nr | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | FM | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUITABLE FOR | S185-E360, S235JR-S355JR, S235J0-S450J0, S235J2-S355J2, S275N-S460N, S275M-S460M, S460Q, P235GH-P355GH, P275N-P460N, P355M-P460M, P355Q-P460Q ASTM: A27, A36, A106 grades A/B/C, A139, A210 grades A1/C, A214, A216 grades WCA/WCB/WCC, A234 grade WPB. A334 grade 1 / API: 5L grades X42-X65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| APPROVALS | CE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WELDING POSITIONS: |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TYPICAL CHEMICAL ANALYSIS OF THE FILLER METAL (%) | <table border="1"> <thead> <tr> <th>C</th> <th>Si</th> <th>Mn</th> <th>P</th> <th>S</th> <th>Al</th> <th>Ti+Zr</th> </tr> </thead> <tbody> <tr> <td>0.05</td> <td>0.5</td> <td>1.2</td> <td>0.01</td> <td>0.01</td> <td>0.1</td> <td>0.17</td> </tr> </tbody> </table> | | | | | | C | Si | Mn | P | S | Al | Ti+Zr | 0.05 | 0.5 | 1.2 | 0.01 | 0.01 | 0.1 | 0.17 | | | | | | | | | | | | | | | | | | | | | | |
| C | Si | Mn | P | S | Al | Ti+Zr | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.05 | 0.5 | 1.2 | 0.01 | 0.01 | 0.1 | 0.17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ALL WELD MECHANICAL PROPERTIES | <table border="1"> <thead> <tr> <th>Heat Treatment</th> <th>R_{p0,2}</th> <th>R_m</th> <th>A₅</th> <th>Impact Energy (J) ISO-V</th> </tr> <tr> <th></th> <th>MPa</th> <th>MPa</th> <th>(%)</th> <th>-30°C</th> </tr> </thead> <tbody> <tr> <td>As Welded /</td> <td>460</td> <td>565</td> <td>24</td> <td>60</td> </tr> </tbody> </table> | | | | | | Heat Treatment | R _{p0,2} | R _m | A ₅ | Impact Energy (J) ISO-V | | MPa | MPa | (%) | -30°C | As Welded / | 460 | 565 | 24 | 60 | | | | | | | | | | | | | | | | | | | | | |
| Heat Treatment | R _{p0,2} | R _m | A ₅ | Impact Energy (J) ISO-V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MPa | MPa | (%) | -30°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| As Welded / | 460 | 565 | 24 | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WELDING PARAMETERS / PACKING | <table border="1"> <thead> <tr> <th>WELDING PARAMETERS</th> <th>WELDING PARAMETERS</th> <th>WELDING PARAMETERS</th> <th>PACKING</th> <th>PACKING</th> <th>PACKING</th> </tr> <tr> <th>D (MM)</th> <th>VOLT (V)</th> <th>CURRENT (A)</th> <th>SPOOL TYPE</th> <th>KG / SPOOL / DRUM</th> <th>KG / PALLET</th> </tr> </thead> <tbody> <tr> <td>0.6</td> <td>14-21</td> <td>30-90</td> <td>D-200 / K-300</td> <td>5 / 15</td> <td>1000 / 1080</td> </tr> <tr> <td>0.8</td> <td>14-27</td> <td>60-200</td> <td>D-200 / K-300 / DRUM</td> <td>5 / 15 / 250</td> <td>1000 / 1080 / 1000</td> </tr> <tr> <td>1.0</td> <td>14-30</td> <td>80-300</td> <td>D-200 / K-300 / DRUM</td> <td>5 / 15 / 250</td> <td>1000 / 1080 / 1000</td> </tr> <tr> <td>1.2</td> <td>15-34</td> <td>120-380</td> <td>D-200 / K-300 / DRUM</td> <td>5 / 15 / 250</td> <td>1000 / 1080 / 1000</td> </tr> </tbody> </table> | | | | | | WELDING PARAMETERS | WELDING PARAMETERS | WELDING PARAMETERS | PACKING | PACKING | PACKING | D (MM) | VOLT (V) | CURRENT (A) | SPOOL TYPE | KG / SPOOL / DRUM | KG / PALLET | 0.6 | 14-21 | 30-90 | D-200 / K-300 | 5 / 15 | 1000 / 1080 | 0.8 | 14-27 | 60-200 | D-200 / K-300 / DRUM | 5 / 15 / 250 | 1000 / 1080 / 1000 | 1.0 | 14-30 | 80-300 | D-200 / K-300 / DRUM | 5 / 15 / 250 | 1000 / 1080 / 1000 | 1.2 | 15-34 | 120-380 | D-200 / K-300 / DRUM | 5 / 15 / 250 | 1000 / 1080 / 1000 |
| WELDING PARAMETERS | WELDING PARAMETERS | WELDING PARAMETERS | PACKING | PACKING | PACKING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D (MM) | VOLT (V) | CURRENT (A) | SPOOL TYPE | KG / SPOOL / DRUM | KG / PALLET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.6 | 14-21 | 30-90 | D-200 / K-300 | 5 / 15 | 1000 / 1080 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.8 | 14-27 | 60-200 | D-200 / K-300 / DRUM | 5 / 15 / 250 | 1000 / 1080 / 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.0 | 14-30 | 80-300 | D-200 / K-300 / DRUM | 5 / 15 / 250 | 1000 / 1080 / 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.2 | 15-34 | 120-380 | D-200 / K-300 / DRUM | 5 / 15 / 250 | 1000 / 1080 / 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REDRYING TEMPERATURE | Not required | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GAS ACCORDING EN 14175 | M21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |