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| <b>CATEGORY</b>     | FCAW Flux-Cored  |
| <b>TYPE</b>         | Seamless micro-alloyed rutile flux-cored wire for CO2 and M21.   |
| <b>APPLICATIONS</b> | Shipbuilding, steel and vessel construction, mechanical engineering and pipe work.   |
| <b>PROPERTIES</b>   | Excellent weld puddle manipulation due to fast freezing slag, superior out-of-position welding also at higher currents. Using temperature up to -40°C. Particularly suited for MAG-orbital welding and all-position welding on ceramic backing. Extreme low spatter loss, easy slag removal and hydrogen content below 3 ml/100g. even after long unconditioned storage. |

|                       |        |                            |
|-----------------------|--------|----------------------------|
| <b>CLASSIFICATION</b> | AWS    | A 5.20: E71T-1C-J H4       |
|                       | AWS    | A 5.20: E71T-1M-J H4       |
|                       | AWS    | A 5.36: E71T1-M21A4-CS1-H4 |
|                       | AWS    | A 5.36: E71T1-1CA0-CS1-H4  |
|                       | EN ISO | 17632-A: T 46 4 P M21 1 H5 |
|                       | F-nr   | 6                          |
|                       | FM     | 1                          |

|                     |                   |                            |                    |               |
|---------------------|-------------------|----------------------------|--------------------|---------------|
| <b>SUITABLE FOR</b> | <b>Materials</b>  | <b>DIN</b>                 | <b>EN</b>          | <b>ASTM</b>   |
|                     | shipbuilding      | A, B, D, E, AH 32 - EH 36  | same               | Typical       |
|                     | Unalloyed steels  | St 33, St 37-2 - St 52-3   | S185 - S355        | A 258 / A 516 |
|                     | boiler steels     | H I, H III, 17Mn4, 19Mn5   | P235GH, P355GH     | A 662 / A 387 |
|                     | pipe steels       | St 35.8, St 45.8           | P235T1/T2, P460NL2 | A 738 / A 612 |
|                     | -                 | StE 210.7 TM, StE 445.7 TM | L210 - L445MB      | A 299         |
|                     | Fine grain steels | StE 255 to StE 460         | S235-S420-S460QL1  | -             |
|                     | API-standard      | X 42, X60                  | X 42, X60          | -             |

|                  |                           |
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| <b>APPROVALS</b> | CE TÜV (12704) Lloyds DNV |
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| <b>WELDING POSITIONS:</b> |  |
|---------------------------|--|

|                                      |     |     |       |       |  |
|--------------------------------------|-----|-----|-------|-------|--|
| <b>TYPICAL WELD DEPOSIT WEIGHT %</b> |     |     |       |       |  |
| C                                    | Si  | Mn  | P     | S     |  |
| 0.08                                 | 0.5 | 1.3 | 0.015 | 0.015 |  |

|                                       |                   |                |     |                         |       |
|---------------------------------------|-------------------|----------------|-----|-------------------------|-------|
| <b>ALL WELD MECHANICAL PROPERTIES</b> |                   |                |     |                         |       |
| Heat Treatment                        | R <sub>p0,2</sub> | R <sub>m</sub> | A5  | Impact Energy (J) ISO-V |       |
| As Welded /                           | MPa               | MPa            | (%) | -20°C                   | -40°C |
|                                       | 490               | 580            | 25  | 90                      | 70    |

|                                     |                           |                           |                      |                   |                   |
|-------------------------------------|---------------------------|---------------------------|----------------------|-------------------|-------------------|
| <b>WELDING PARAMETERS / PACKING</b> |                           |                           |                      |                   |                   |
| <b>WELDING PARAMETERS</b>           | <b>WELDING PARAMETERS</b> | <b>WELDING PARAMETERS</b> | <b>PACKING</b>       | <b>PACKING</b>    | <b>PACKING</b>    |
| D (MM)                              | VOLTAGE (V)               | CURRENT (A) DC+           | SPOOL TYPE           | KG / SPOOL / DRUM | KG / PALLET       |
| 1,0                                 | 19-26                     | 140-230                   | D-200 / K-300 / DRUM | 5 / 16 / 300      | 1000 / 1024 / 600 |
| 1,2                                 | 22-29                     | 160-290                   | D-200 / K-300 / DRUM | 5 / 16 / 300      | 1000 / 1024 / 600 |
| 1,6                                 | 23-33                     | 180-350                   | K-300 / K-415 / DRUM | 16 / 25 / 300     | 1024 / 900 / 600  |
| 2,0                                 | 24-36                     | 220-420                   | K-300 / K-415 / DRUM | 16 / 25 / 300     | 1024 / 900 / 600  |
| 2,4                                 | 24-38                     | 240-480                   | K-300 / K-415 / DRUM | 16 / 25 / 300     | 1024 / 900 / 600  |

|                             |              |
|-----------------------------|--------------|
| <b>REDRYING TEMPERATURE</b> | Not required |
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| <b>GAS ACCORDING EN 14175</b> | M21, C1 |
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