



**DATA SHEET**  
**DS 106**  
**Rev. 6 dd 14/05/2015**  
**INETIG B2**

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**CLASSIFICATION**

**APPROVALS**

| AWS SPECIFICATIONS       | EN SPECIFICATIONS           |
|--------------------------|-----------------------------|
| AWS A 5.28: ER80S-B2     | EN ISO 21952-B: W 55 11 1CM |
| AWS A 5.28M: ER55S-B2    |                             |
| ASME SFA 5.28: ER80S-B2  |                             |
| ASME SFA 5.28M: ER55S-B2 |                             |

|     |  |  |
|-----|--|--|
| TÜV |  |  |
|     |  |  |
|     |  |  |

**ALLOY TYPE**

1.25Cr-0.5Mo content to be used for the welding of creep resistant steel.

**APPLICATIONS**

Low alloy copper-coated tig rod with 1.25% Cr and 0.5% Mo content to be used for the welding of creep resistant steel. Chemical composition of rod conforming to AWS specification. It is used in chemical industry and in the ammonia synthesis process, for heat exchangers, boilers, piping and pressure vessels for temperature service up to about 550°C. It will also find applications in the petro-chemical industries, suitable for facing on casting and for casting repairs.

**MATERIALS TO BE WELDED**

| ASTM             |                | EN                  |                        | Others |
|------------------|----------------|---------------------|------------------------|--------|
| A387 Gr 11&12    | A200 T11       | 10028-2 13CrMo 4-5  | (BS 1501 Gr 620 & 621) |        |
| A182 F11 & F12   | A213 T11 & T12 | 10083-1 25CrMo4     | (BS 1502 Gr 620)       |        |
| A217 WC6 & WC11  | A335 P22       | 10222-2 14CrMo 4-5  | (BS 1503 Gr 620 & 621) |        |
| A234 WP11 & WP12 | A335 P11 & P12 | (DIN 17210 16MnCr5) | (BS 1504 Gr 621)       |        |
| A199 T11         |                | (DIN 13CrMo 4-4)    | (BS 3100 Gr B2)        |        |
|                  |                | (DIN 16CrMo4-4)     | (BS 3604 Gr 620/440)   |        |
|                  |                | (DIN 11CrMo 5-5)    | (BS 3059 Gr 620/460)   |        |

**WELDING GUIDELINES**

Preheat and interpass temperature 150°C. PWHT at 620°C for an hour.

**TECHNICAL INFORMATION**

Gas: Argon 100% (EN ISO 14175)  
Welding positions: all positions



**WELDING PARAMETERS**

| Current | DC - Straight polarity |
|---------|------------------------|
|---------|------------------------|

**PACKAGING DATA**

| Diameter (mm) | 1.2     | 1.6     | 2.0     | 2.4     | 3.2     | 4.0     |
|---------------|---------|---------|---------|---------|---------|---------|
| Length (mm)   | 1000    | 1000    | 1000    | 1000    | 1000    | 1000    |
| Carton        | 5/25 Kg | 5/25 Kg | 5/25 Kg | 5/25 Kg | 5/25 Kg | 5/25 Kg |

\* tolerances according to EN ISO 544 specification.

All information in this data sheet is subject to change without notice.



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**TYPICAL CHEMICAL COMPOSITION OF WIRE**

| C %  | Mn % | Si % | S %   | P %   | Cr % | Ni % | Mo % | Cu % |  |
|------|------|------|-------|-------|------|------|------|------|--|
| 0.08 | 0.60 | 0.60 | 0.010 | 0.010 | 1.30 | -    | 0.50 | 0.15 |  |

**TYPICAL MECHANICAL PROPERTIES**

| GAS |            | Yield strength | Tensile strength | Elongation on % 5d | Impact energy (Charpy V) |         |         |         |         |
|-----|------------|----------------|------------------|--------------------|--------------------------|---------|---------|---------|---------|
|     |            | Rs             | Rm               | A 5d               | + 20°C                   | 0°C     | -20°C   | -40°C   | -60°C   |
|     |            | (MPa)          | (MPa)            | %                  | (Joule)                  | (Joule) | (Joule) | (Joule) | (Joule) |
| I1  | after PWHT | 490            | 590              | 25                 | 250                      | -       | -       | -       | -       |

**PRODUCTS AVAILABLE**

| Process               | Product         | Classification AWS    | Classification EN     |
|-----------------------|-----------------|-----------------------|-----------------------|
| MIG/MAG<br>Solid wire | INEFIL B2       | AWS A 5.28: ER80S-B2  | EN 21952-B: G 1CM     |
|                       | INEFIL CROMO 1  | AWS A 5.28: ER80S-G   | EN 21952-A: G CrMo1Si |
|                       | INEFIL B2 L     | AWS A 5.28: ER70S-B2L | EN 21952-B: G 1CML    |
| TIG<br>Rods           | INETIG B2 L     | AWS A 5.28:ER70S-B2L  | EN 21952-B: W 1CML    |
|                       | INETIG CROMO 1  | AWS A 5.28: ER80S-G   | EN 21952-A: W CrMo1Si |
| SAW<br>Submerged arc  | INESUB EB2      | AWS A 5.23: EB2       | EN 24598-A: S CrMo1   |
|                       | INESUB EB2R     | AWS A 5.23: EB2R      | EN 24598-A: S CrMo1   |
| FCAW<br>Cored wire    | INETUB B81T5-B2 | AWS A 5.29: E81T5-B2  | EN 17634-A: T CrMo1   |
|                       | INETUB M81TG-B2 | AWS A 5.29: E81TG-B2  | EN 17634-A: T CrMo1   |
|                       | INETUB R81T1-B2 | AWS A 5.29: E81T1-B2  | EN 17634-A: T CrMo1   |
| SMAW<br>Electrodes    | INE B2          | AWS A 5.5: E8018-B2   | EN 3580-A: E CrMo1    |
|                       | INE B2 L        | AWS A 5.5: E7018-B2L  | EN 3580-A: E CrMo1L   |