

## Classification

AWS A5.22-95 : E 316LT1-1 / -4      EN 12073-99 : T 19 12 3 L P C/M 2

## General description

**Gas shielded flux cored stainless steel wire electrode**  
**Stable arc, low spatter and good slag removal**  
**Excellent wire feeding and operator appeal**  
**Bright appearance of weld metal**

## Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3G up PE/4G

## Current type/Shielding gas

DC+  
 Ar+ (>5-25%) CO<sub>2</sub> (EN439: M21)  
 100% CO<sub>2</sub> (EN439: C1)

## Approvals

|     | LR | DNV | GL |
|-----|----|-----|----|
| M21 | +  | +   | +  |
| C1  |    | +   |    |

## Chemical composition (w%) and Ferrite Number (FN), typical, all weld metal

| Shielding gas | C    | Mn  | Si  | Cr   | Ni   | Mo  | FN |
|---------------|------|-----|-----|------|------|-----|----|
| M21/C1        | 0.03 | 1.3 | 0.6 | 18.3 | 12.5 | 2.8 | 9  |

## Mechanical properties, typical, all weld metal

| Condition:            | Yield strength<br>(N/mm <sup>2</sup> ) | Tensile strength<br>(N/mm <sup>2</sup> ) | Elongation<br>(%) | Impact ISO-V(J)<br>-20°C |
|-----------------------|--|--|-------------------|--------------------------|
| As welded             |  |  |                   |                          |
| Required AWS          | not required                           | min. 485                                 | min. 30           |                          |
| EN                    | min. 320                               | min. 510                                 | min. 25           |                          |
| Typical values M21/C1 | 415                                    | 560                                      | 41                | 45                       |

## Packaging and available sizes

| Unit               | Net weight<br>(kg) | Size (mm) |
|--------------------|--------------------|-----------|
| Plastic spool S200 | 5                  | X         |
| Plastic spool S300 | 12.5               | X         |

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance.

Fumes: Consult information on Welding Safety Sheet, available upon request.

## Materials to be welded

| Steel grades                | EN 10088-11-2             | EN 102 13-4      | W.Nr.  | ASTM/ACI<br>A240/A312/A351 | UNS    |
|-----------------------------|---------------------------|------------------|--------|----------------------------|--------|
| Extra low carbon<br>C<0,03% | X2 CrNiMo 17-12-2         |                  | 1.4404 | (TP)316L                   | S31603 |
|                             |                           |                  |        | CF-3M                      | J92800 |
|                             | X2 CrNiMo 18-14-3         |                  | 1.4435 | (TP)316L                   | S31603 |
|                             | X2 CrNiMoN 17-11-2        |                  | 1.4406 | (TP)316LN                  | S31653 |
| Medium carbon<br>C > 0,03%  | X2 CrNiMoN 17-13-3        |                  | 1.4429 |                            |        |
|                             | X4 CrNiMo 17-12-2         |                  | 1.4401 | (TP)316                    | S31600 |
|                             | X4 CrNiMo 17-13-3         |                  | 1.4436 |                            |        |
| Ti-, Nb-<br>stabilized      | X6 CrNiMoTi 17-12-2       |                  | 1.4571 | 316Ti                      | S31635 |
|                             | X6 CrNiMoNb 17-12-21.4580 |                  | 316Cb  |                            | S31640 |
|                             | X6 CrNiNb 18-10           |                  | 1.4550 | (TP)347                    | S34700 |
|                             |                           | GX5 CrNiNb 19-10 | 1.4552 | CF-8C                      | J92710 |

## Welding parameters, optimum fill in shielding gas M21/C1

| Welding position<br>Diameter(mm) | 1G/2F<br>Current(A) | 2G      | 3G<br>(up) |
|----------------------------------|---------------------|---------|------------|
| 1.2                              | 100-250             | 100-200 | 100-200    |

## Remarks / Application advice

Use for downhand welding: Cor-A-Rosta 316L