

# VdTÜV-Kennblatt for welding consumables

|                                                                                                                                                                                                                                                                                                          |    |                                                                                                                                   |                                                                                 |                                                        |                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                         |    | 1 Manufacturer/Supplier<br>Lincoln Electric Europe B.V. - SAF-FRO-Brand<br>with manufacturer's works according to VdTÜV list 1000 |                                                                                 | 2 No. of<br>VdTÜV-Kennblatt:<br>04120.09<br>21.06.2018 |                                                                                      |
| 3 Welding consumable*:                                                                                                                                                                                                                                                                                   |    | Drahtelektrode                                                                                                                    |                                                                                 |                                                        |                                                                                      |
| 4 Trade name*:                                                                                                                                                                                                                                                                                           |    | FILCORD D                                                                                                                         |                                                                                 |                                                        |                                                                                      |
| 7 Type*:                                                                                                                                                                                                                                                                                                 |    | EN ISO 14341-A - G 46 4 M 4Si1 / G 46 3 C 4Si1                                                                                    |                                                                                 |                                                        |                                                                                      |
| 11 Diameter range:                                                                                                                                                                                                                                                                                       |    | 0,8 bis 2,0 mm                                                                                                                    |                                                                                 |                                                        |                                                                                      |
| 12 Auxiliary materials:                                                                                                                                                                                                                                                                                  |    | EN ISO 14175 - M2 - M3 - C1                                                                                                       |                                                                                 |                                                        |                                                                                      |
| 13 The validity of this Kennblatt will be certified, respectively, in the latest edition of CD-ROM TÜV-eignungsgeprüfte Schweißzusätze                                                                                                                                                                   |    |                                                                                                                                   |                                                                                 |                                                        |                                                                                      |
| 15 Materials and postweld heat treatment                                                                                                                                                                                                                                                                 |    |                                                                                                                                   |                                                                                 |                                                        |                                                                                      |
| Pos                                                                                                                                                                                                                                                                                                      | Wb | Group / Material 1                                                                                                                | Text                                                                            | Group / Material 2                                     | Remarks                                                                              |
|                                                                                                                                                                                                                                                                                                          | N  | Gruppe 1.1                                                                                                                        |                                                                                 |                                                        |                                                                                      |
|                                                                                                                                                                                                                                                                                                          | U  | Gruppe 1.1                                                                                                                        |                                                                                 |                                                        |                                                                                      |
|                                                                                                                                                                                                                                                                                                          | S  | Gruppe 1.1                                                                                                                        |                                                                                 |                                                        |                                                                                      |
|                                                                                                                                                                                                                                                                                                          | U  | Gruppe 1.2                                                                                                                        |                                                                                 |                                                        |                                                                                      |
|                                                                                                                                                                                                                                                                                                          | S  | Gruppe 1.2                                                                                                                        |                                                                                 |                                                        |                                                                                      |
|                                                                                                                                                                                                                                                                                                          | N  | Gruppe 1.2 (ReH max. 290 MPa)                                                                                                     |                                                                                 |                                                        |                                                                                      |
|                                                                                                                                                                                                                                                                                                          | S  | Gruppe 1.3 (ReH max. 420 MPa)                                                                                                     |                                                                                 |                                                        | (1)                                                                                  |
|                                                                                                                                                                                                                                                                                                          | U  | Gruppe 1.3 (ReH max. 460 MPa)                                                                                                     |                                                                                 |                                                        |                                                                                      |
|                                                                                                                                                                                                                                                                                                          | U  | Gruppe 2.1                                                                                                                        |                                                                                 |                                                        |                                                                                      |
|                                                                                                                                                                                                                                                                                                          | S  | Gruppe 2.1 (ReH max. 420 MPa)                                                                                                     |                                                                                 |                                                        | (1)                                                                                  |
|                                                                                                                                                                                                                                                                                                          | S  | Gruppe 3.1 (ReH max. 420 MPa)                                                                                                     |                                                                                 |                                                        | (1)                                                                                  |
|                                                                                                                                                                                                                                                                                                          | U  | Gruppe 3.1 (ReH max. 460 MPa)                                                                                                     |                                                                                 |                                                        |                                                                                      |
| 16 Material groups acc. to CR ISO 15608                                                                                                                                                                                                                                                                  |    |                                                                                                                                   |                                                                                 |                                                        |                                                                                      |
| 21 Root weldability:                                                                                                                                                                                                                                                                                     |    | verified                                                                                                                          |                                                                                 |                                                        |                                                                                      |
| 23 Wall thickness:                                                                                                                                                                                                                                                                                       |    | max. 50 mm                                                                                                                        |                                                                                 |                                                        |                                                                                      |
| 24 Type of current and polarity:                                                                                                                                                                                                                                                                         |    | G+                                                                                                                                |                                                                                 |                                                        |                                                                                      |
| 25 Welding position according to DIN EN ISO 6947:1997-05: PA, PB, PC, PD, PE, PF, PG                                                                                                                                                                                                                     |    |                                                                                                                                   |                                                                                 |                                                        |                                                                                      |
| 26 Highest operating temperature in the short-term range as for parent metal, but not higher than:                                                                                                                                                                                                       |    |                                                                                                                                   |                                                                                 | 450°C                                                  |                                                                                      |
| 27 Highest operating temperature in the long-term range max.:                                                                                                                                                                                                                                            |    |                                                                                                                                   |                                                                                 | - - - °C                                               |                                                                                      |
| 28 Lowest operating temperature/as for parent metal, but not lower than:                                                                                                                                                                                                                                 |    |                                                                                                                                   |                                                                                 | (2) , (3) -40°C                                        |                                                                                      |
| 29 Design stress value/as for parent metal:                                                                                                                                                                                                                                                              |    | wie Grundwerkstoff                                                                                                                |                                                                                 |                                                        |                                                                                      |
| 30 For use in the long-term range:                                                                                                                                                                                                                                                                       |    | - - -                                                                                                                             |                                                                                 |                                                        |                                                                                      |
| 31 Resistance to intergranular corrosion proven in accordance with:                                                                                                                                                                                                                                      |    | - - -                                                                                                                             |                                                                                 |                                                        |                                                                                      |
| 32 Remarks:<br>(1) Gilt nur für M2; S: Temperatur 580°C, Haltezeit 1 h.<br>(2) M2 - M3: tmin = -50°C für Glühzustand U und S; M2 - C: tmin = -10°C für Glühzustand N.                                                                                                                                    |    |                                                                                                                                   |                                                                                 |                                                        |                                                                                      |
| 33 The approval test was done on the basis of VdTÜV-Merkblatt 1153. Where nothing different is said under the heading -Remarks-, this welding consumable is suitable provided Annex I Point 4 of the Pressure Equipment Directive 97/23/EC is observed.                                                  |    |                                                                                                                                   |                                                                                 |                                                        |                                                                                      |
| 34 Explanations                                                                                                                                                                                                                                                                                          |    | A tempered<br>L solution annealed and quenched<br>N normalized                                                                    | S stress-relieved<br>St stabilized<br>U non-annealed<br>V hardened and tempered | W soft annealed                                        | G+ direct current plus pole<br>G- direct current minus pole<br>W alternating current |
| 35 Compiled in accordance with the data of: TÜV Pfalz                                                                                                                                                                                                                                                    |    |                                                                                                                                   |                                                                                 |                                                        |                                                                                      |
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\*) Statements of the manufacturer

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