

## Application

SiF is a heat-resistant single-core flexible wire with silicone rubber (SiR) insulation over a fine-wire class 5 tinned copper conductor, rated 300/500 V and built to the German specification DIN VDE 0250 (VDE). Being single-core it has no outer sheath - the silicone

insulation is the only covering. It belongs to the same silicone family

as the multi-core SiHF and the harmonised H05SS-F. The silicone insulation allows continuous operation at up to +180 °C, withstands short-term peaks and thermal shock, and in fire forms an insulating ash; the wire is not tested for circuit integrity (functional endurance). SiF is used as an appliance, internal and connecting wire in heat-exposed equipment and installations - ovens and furnaces, lighting and luminaires, heaters, saunas, boiler and steam plant, control-cabinet wiring, and the steel, glass and ceramics industries. A glass-fibre-braid-reinforced variant (SiF/GL) is also available where additional mechanical and abrasion protection is required; the base SiF on this sheet has the plain silicone insulation only.



## CONSTRUCTION

|                   |                                                                                            |
|-------------------|--------------------------------------------------------------------------------------------|
| <b>Conductor</b>  | Fine-wire stranded tinned (metal-coated) copper, class 5 to IEC/EN 60228 (VDE 0295).       |
| <b>Insulation</b> | Silicone rubber (SiR), compound EI2 to EN 50363-1.                                         |
| <b>Sheath</b>     | None - single-core wire; the silicone insulation is the outer covering.                    |
| <b>Colours</b>    | Single core available in a range of solid colours (incl. green/yellow); black as standard. |

## ELECTRICAL & THERMAL PROPERTIES

|                                             |                                                                                                                  |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Rated voltage Uo/U</b>                   | 300/500 V.                                                                                                       |
| <b>Test voltage</b>                         | 2.0 kV.                                                                                                          |
| <b>Standard</b>                             | DIN VDE 0250 (VDE); conductor IEC/EN 60228 class 5.                                                              |
| <b>Flame-retardant</b>                      | IEC/EN 60332-1-2.                                                                                                |
| <b>Halogen-free</b>                         | Halogen-free acc. to IEC 60754-1.                                                                                |
| <b>Max. conductor temperature</b>           | +180 °C (short-term +250 °C).                                                                                    |
| <b>Permitted service temperature, fixed</b> | -50 °C to +180 °C.                                                                                               |
| <b>Min. bending radius, fixed</b>           | 6 × outer diameter.                                                                                              |
| <b>Reaction to fire (CPR)</b>               | Outside the scope of EN 50575 (flexible connection cable, not for permanent installation in construction works). |

**DIMENSIONS & TECHNICAL DATA**

| Nominal c.s.a.<br>(mm <sup>2</sup> ) | Cond. R @20°C<br>(Ω/km) | Nominal O.D.<br>(mm) | Weight<br>(kg/km) |
|--------------------------------------|-------------------------|----------------------|-------------------|
| 0.5                                  | 39                      | 2.1                  | 9                 |
| 0.75                                 | 26                      | 2.4                  | 12                |
| 1                                    | 19.5                    | 2.5                  | 15                |
| 1.5                                  | 13.3                    | 2.8                  | 20                |
| 2.5                                  | 7.98                    | 3.4                  | 32                |
| 4                                    | 4.95                    | 4.2                  | 50                |
| 6                                    | 3.3                     | 5                    | 73                |
| 10                                   | 1.91                    | 6.6                  | 118               |
| 16                                   | 1.21                    | 7.4                  | 177               |
| 25                                   | 0.78                    | 9.2                  | 277               |
| 35                                   | 0.554                   | 10.3                 | 374               |
| 50                                   | 0.386                   | 12.2                 | 530               |
| 70                                   | 0.272                   | 14.2                 | 724               |
| 95                                   | 0.206                   | 16.6                 | 982               |
| 120                                  | 0.161                   | 18                   | 1219              |
| 150                                  | 0.129                   | 20                   | 1524              |
| 185                                  | 0.106                   | 22.5                 | 1915              |

Outer diameters and weights are nominal manufacturer values of the leading reference source; conductor resistance is the maximum per IEC/EN 60228 class 5. SiF is a single-core wire without an outer sheath. All values are indicative and non-binding.