

## Special Alloys SD94



| Material Designation |        | Nominal Composition (mass content in %) |         | About the Alloy  |
|----------------------|--------|---|---------|--|
| DMA Symbol           | SD94   | Cu                                      | Balance | SD94-wire belongs to the low-alloyed copper alloys which exhibit a mean electrical and thermal conductivity. At the same time SD94, in contrast to copper, is distinguished by a higher strength and a better softening behaviour. |
| DIN-EN Symbol        | CuFe2P | Fe                                      | 2.4     |  |
| DIN-EN               | CW107C | Zn                                      | < 0.12  | SD94 is very well for cold-forming and due to its physical properties predestined for the use in electronic construction, contact and switching elements.  |
| UNS                  | C19400 | Pb                                      | < 0.03  |  |
| JIS                  | C1940  | P                                       | 0.03    |  |
|                      |        | Others                                  | < 0.2   |  |

| Physical Properties*   |            |                             | Mechanical Properties*   |           | Available Dimensions |                         |              |
|--|------------|-----------------------------|--|-----------|----------------------|-------------------------|--------------|
| Electrical conductivity  | 36.5<br>63 | MS/m<br>% IACS              | Tensile strength soft<br>N/mm <sup>2</sup>   | 330 - 400 | Round wire           | 1.2 - 5 mm<br>in coils  | max. 100 kg  |
| Thermal conductivity   | 260        | W/(m·K)                     | Elongation soft<br>A100 in %   | > 30      |                      | 1.8 - 5 mm<br>on stands | max. 1500 kg |
| Thermal expansion coefficient**                                    | 17         | 10 <sup>-6</sup> /K         | Tensile strength hard<br>N/mm <sup>2</sup>   | 500 - 570 |                      | 0.5 - 3 mm<br>on reels  | max. 1000 kg |
| Density  | 8.9        | g/cm <sup>3</sup>           | * Reference values   |           |                      |                         |              |
| Modulus of elasticity  | 123        | GPa<br>= kN/mm <sup>2</sup> | <b>Typical Applications</b>  |           |                      |                         |              |
| * Reference values at room temperature<br>** Between 20 and 300 °C |            |                             | <ul style="list-style-type: none"> <li>• Conductor and connector wire</li> <li>• Pins</li> </ul> |           |                      |                         |              |

| Your Contact Person              |   |
|----------------------------------|---|
| Worldwide                        |   |
| <b>Sundwiger<br/>Messingwerk</b> | A Diehl Metal Applications company<br>Sundwiger Messingwerk GmbH & Co. KG<br><br>Hönnetalstraße 110<br>58675 Hemer<br>Germany<br>Phone +49 2372 661-143<br>Fax +49 2372 661-48143<br>E-Mail: jens.mittendorff@diehl.com<br>www.diehl.com/metall |

The information given in this material data sheet, which in any case provides no guarantee of particular characteristics, has been compiled to the best of our knowledge but is given without any obligation on our part. Our liability is determined solely by the individual contract terms, in particular by our general conditions of sale. We reserve the right to make alterations especially where necessitated by technical developments or changes in availability.

Please ask for the latest edition of this material data sheet.