

AISI

Aluminum Wire

Mechanical Properties

AISI soft

| Diameter* | (µm) | 18 | 20 | 25 | 32 | 38 | 50 | 75 |
|------------------|------|---------|---------|---------|---------|---------|---------|----------|
| Elongation | (%) | >1 | >1 | >1 | >1 | >1 | >1 | >1 |
| Breaking Load** | (cN) | 5 – 7 | 7 – 10 | 12 – 15 | 17 – 21 | 24 – 30 | 38 – 46 | 90 – 110 |
| Part number | 100m | 5164247 | 5164251 | 5164275 | 5164290 | 5164303 | 5164309 | 5164335 |
| | 500m | 5164248 | 5164272 | 5164276 | 5164291 | 5164304 | 5164310 | 5164336 |
| Spool Color | | Green | | | | | | |
| Tape Start Color | | Green | | | | | | |
| Tape End Color | | Black | | | | | | |

AISI medium

| Diameter* | (µm) | 18 | 20 | 25 | 32 | 38 | 50 | 75 |
|------------------|------|---------|---------|---------|---------|---------|---------|-----------|
| Elongation | (%) | >1 | >1 | >1 | >1 | >1 | >1 | >1 |
| Breaking Load** | (cN) | 7 – 10 | 10 – 12 | 15 – 17 | 20 – 24 | 28 – 34 | 45 – 55 | 110 – 120 |
| Part number | 100m | 5164249 | 5164273 | 5164277 | 5164312 | 5164305 | 5164311 | 5164337 |
| | 500m | 5164250 | 5164274 | 5164278 | 5164313 | 5164306 | 5164332 | 5164338 |
| Spool Color | | Blue | | | | | | |
| Tape Start Color | | Green | | | | | | |
| Tape End Color | | Black | | | | | | |

AISI hard

| Diameter* | (µm) | 25 | 32 | 38 | 50 | 75 |
|------------------|------|---------|---------|---------|---------|-----------|
| Elongation | (%) | >1 | >1 | >1 | >1 | >1 |
| Breaking Load** | (cN) | 17 – 19 | 23 – 27 | 32 – 38 | 55 – 65 | 120 – 140 |
| Part number | 100m | 5164279 | 5164314 | 5164307 | 5164333 | 5164339 |
| | 500m | 5164280 | 5164315 | 5164308 | 5164334 | 5164340 |
| Spool Color | | Red | | | | |
| Tape Start Color | | Green | | | | |
| Tape End Color | | Black | | | | |

*1mil ≈ 25µm; **100cN ≈ 100g

Testing criteria for breaking load and elongation:

Testing velocity: 10mm / min – Test length of sample: 100 mm

Technical parameters: The above parameters are standard values. Customized specification and intermediate dimensions possible after clarification with Heraeus technical experts.

The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for particular application. The Heraeus logo, Heraeus, and figurative mark are trademarks or registered trademarks of Heraeus Holding GmbH or its affiliates. All rights reserved.

AISi

Aluminum Wire

| Material Characteristics | |
|--|---|
| Physical Properties | |
| Density | 2.7 g/cm ³ |
| Melting point | 655 °C |
| Modulus of rigidity | 27 kN/mm ² |
| Linear expansion coefficient (20 – 30 °C) | 25 (10 ⁻⁶ *K ⁻¹) |
| Thermal conductivity at 20 °C | 195 W/m*K |
| Electrical resistivity at 20 °C | 3.0 μΩ*cm |
| Electrical conductivity at 20 °C | 57 % IACS |
| Temp. coefficient of elec. resistance (0 – 100 °C) | 3.95 (10 ⁻³ *K ⁻¹) |
| Chemical Properties | |
| Al purity (base material) | ~99,9995% |
| Si content | 0,95 -1,05% |
| Max. content impurity elements | 100 wt.-ppm |
| Other Guidelines | |
| Floor life | 1 month |
| Shelf life | 6 months |

Americas

Phone +1 610 825 6050
 electronics.americas@heraeus.com

Asia Pacific

Phone +65 6571 7649
 electronics.apac@heraeus.com

China

Phone +86 53 5815 9601
 electronics.china@heraeus.com

Europe, Middle East and Africa

Phone +49 6181 35 4370
 electronics.emea@heraeus.com

The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for particular application. The Heraeus logo, Heraeus, and figurative mark are trademarks or registered trademarks of Heraeus Holding GmbH or its affiliates. All rights reserved.