

## AISI-CR

### 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	TBD	TBD	5164626	5164662	5164668	5164674	5164680
	500m	TBD	TBD	5164627	5164663	5164669	5164675	5164681
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	TBD	TBD	5164628	5164664	5164670	5164676	5164682
	500m	TBD	TBD	5164629	5164665	5164671	5164677	5164683
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	5164630	5164666	5164672	5164678	5164684
	500m	5164631	5164667	5164673	5164679	5164685
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.

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## AISI-CR

### Aluminum Wire

Material Characteristics	
<b>Physical Properties</b>	
Density	2.7 g/cm <sup>3</sup>
Melting point	655 °C
Modulus of rigidity	27 kN/mm <sup>2</sup>
Linear expansion coefficient (20 – 30 °C)	25 (10 <sup>-6</sup> *K <sup>-1</sup> )
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 <sup>-3</sup> *K <sup>-1</sup> )
<b>Chemical Properties</b>	
Al purity (base material)	~99,9995%
Si content	0,95 -1,05%
Standard element limits	Ni 40-60 wt.-ppm
Max. content impurity elements	max. 50 wt.-ppm
<b>Other Guidelines</b>	
Floor life	1 month
Shelf life	6 months

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