

# SINTERING-DATA-SHEET

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|                       |             |
|-----------------------|-------------|
| <b>powder - code:</b> | NeoLoy-2000 |
|-----------------------|-------------|

|                        |                   |                         |  |                    |  |
|------------------------|-------------------|-------------------------|--|--------------------|--|
| <b>main component:</b> | Fe, Ni            | <b>binder:</b>          |  | <b>date:</b>       |  |
| <b>machine type:</b>   | DSP-25            | <b>aver. Grain size</b> |  | <b>testperson:</b> |  |
| <b>utilisation:</b>    | New Base material |                         |  |                    |  |

|                   |                 |   |                             |                      |   |
|-------------------|-----------------|---|-----------------------------|----------------------|---|
| <b>heating by</b> | <b>die:</b>     | X | <b>temperature measure-</b> | <b>pyroscope:</b>    |   |
|                   | <b>punches:</b> |   | <b>ment by:</b>             | <b>thermocouple:</b> | X |

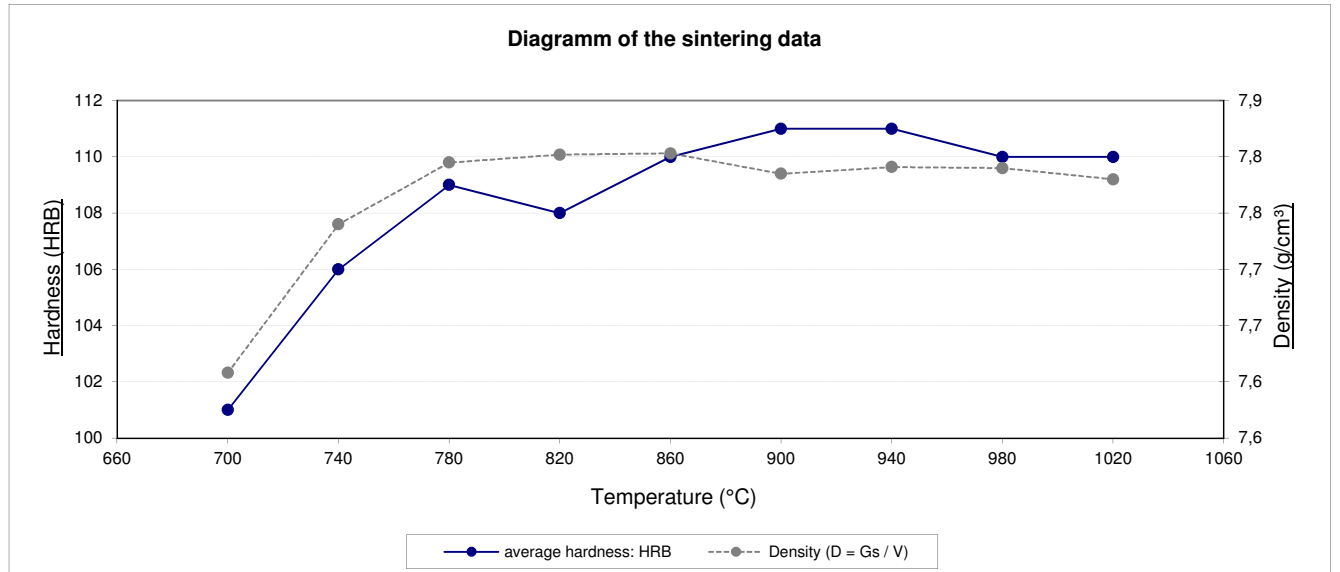
|                           |                    |     |     |     |     |     |     |     |     |
|---------------------------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>temperature:</b>       | $^{\circ}\text{C}$ | 700 | 740 | 780 | 820 | 860 | 900 | 940 | 980 |
| <b>specific pressure:</b> | $\text{N/mm}^2$    | 35  | ==> |     |     |     |     |     |     |
| <b>sintering time:</b>    | $\text{min}$       | 3   | ==> |     |     |     |     |     |     |

|                                |                 |        |         |         |         |         |         |         |         |
|--------------------------------|-----------------|--------|---------|---------|---------|---------|---------|---------|---------|
| <b>bending strength:</b>       | $\text{N/mm}^2$ |        |         |         |         |         |         |         |         |
| <b>stretch at break:</b>       | %               |        |         |         |         |         |         |         |         |
| <b>average hardness:</b>       | HRB             | 101    | 106     | 109     | 108     | 110     | 111     | 111     | 110     |
| <b>hardness scattering:</b>    | HRB             | 99-103 | 105-106 | 109-109 | 108-109 | 109-110 | 110-112 | 111-112 | 109-111 |
| <b>average hardness:</b>       | HRC             |        |         |         |         |         |         |         |         |
| <b>hardness scattering:</b>    | HRC             |        |         |         |         |         |         |         |         |
| <b>weight:</b>                 | $\text{g}$      | 17     | ==>     |         |         |         |         |         |         |
| <b>weight after sintering:</b> | $\text{g}$      |        |         |         |         |         |         |         |         |

|                                   |                 |      |      |      |      |      |      |      |      |
|-----------------------------------|-----------------|------|------|------|------|------|------|------|------|
| <b>Volume</b> ( $V = G_s - G_w$ ) | $\text{cm}^3$   |      |      |      |      |      |      |      |      |
| <b>Density</b> ( $D = G_s / V$ )  | $\text{g/cm}^3$ | 7,61 | 7,74 | 7,80 | 7,80 | 7,80 | 7,79 | 7,79 | 7,79 |

|                                             |            |  |  |  |  |  |  |  |  |
|---------------------------------------------|------------|--|--|--|--|--|--|--|--|
| <b>weight loss</b> ( $G = G_e - G_s$ )      | $\text{g}$ |  |  |  |  |  |  |  |  |
| <b>rel. Weight loss</b> ( $G_r = G * 100$ ) | %          |  |  |  |  |  |  |  |  |

|               |  |  |  |  |  |  |  |  |  |
|---------------|--|--|--|--|--|--|--|--|--|
| <b>notes:</b> |  |  |  |  |  |  |  |  |  |
|---------------|--|--|--|--|--|--|--|--|--|



**Attention:**

Depending on mould-geometry and type and place of temperature-measurement an increase up to 60 °C must be done to get the same result !  
 In case of moulds with a high number of graphite punches a certain friction value needs to be considered. To obtain the detailed formula you are welcome to contact us.

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