

# SINTERING-DATA-SHEET

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<b>powder - code:</b>	DiaWeld-3100
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<b>main component:</b>	Fe	<b>binder:</b>	2 % alcohol	<b>date:</b>	23.01.2017
<b>machine type:</b>	DSP-25	<b>aver. Grain size</b>		<b>testperson:</b>	OE
<b>utilisation:</b>	weldable backing				

<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

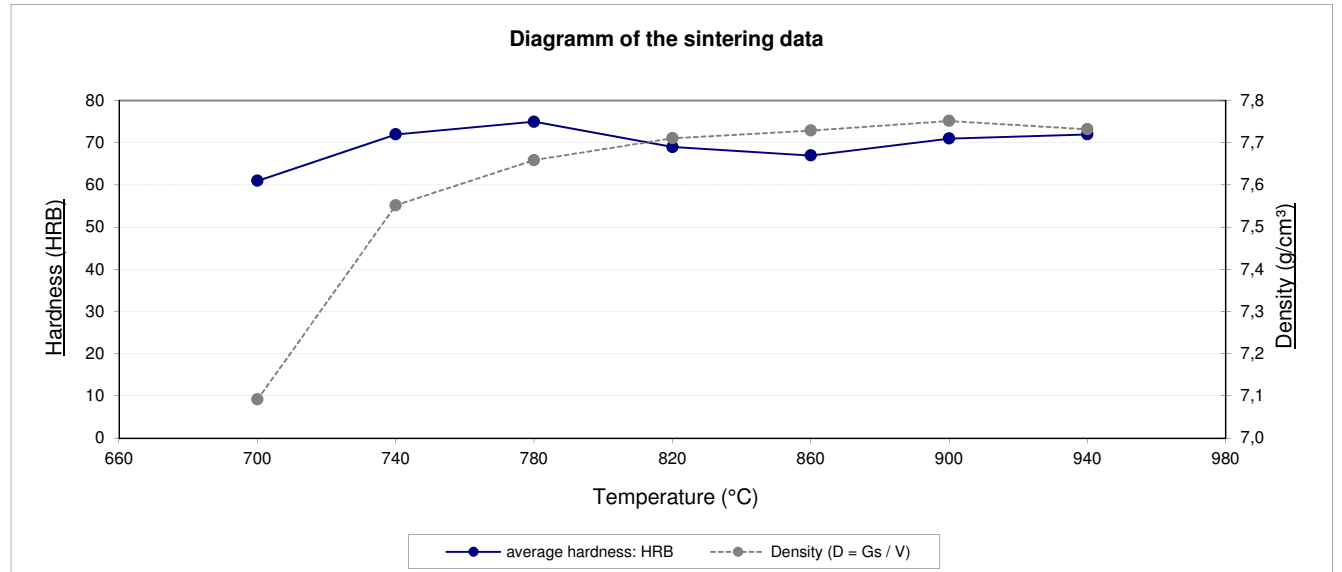
<b>temperature:</b>	$^{\circ}\text{C}$	700	740	780	820	860	900	940	
<b>specific pressure:</b>	$\text{N/mm}^2$	35	==>						
<b>sintering time:</b>	$\text{min}$	3	==>						

<b>bending strength:</b>	$\text{N/mm}^2$								
<b>stretch at break:</b>	%								
<b>average hardness:</b>	HRB	61	72	75	69	67	71	72	
<b>hardness scattering:</b>	HRB	59-65	71-76	70-77	66-70	64-69	69-72	72-73	
<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> ( $D = G_s / V$ )	$\text{g/cm}^3$	7,09	7,55	7,66	7,71	7,73	7,75	7,73	

<b>weight loss</b> ( $G = G_e - G_s$ )	$\text{g}$								
<b>rel. Weight loss</b> ( $Gr = G * 100$ )	%	8,47							

<b>notes:</b>	extrusion	==>							
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**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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