

# S I N T E R I N G - D A T A - S H E E T

DR. FRITSCH GmbH & Co. KG

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<b>powder - code:</b>	Diacob 1600
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<b>main component:</b>	Co	<b>binder:</b>		<b>date:</b>	24.08.00
<b>machine type:</b>	DSP-25	<b>aver. Grain size</b>	ca. 1,5 µ	<b>testperson:</b>	CW
<b>utilisation:</b>					

<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>	°C	740	780	820	860	900	940	980	1020
<b>specific pressure:</b>	N/mm <sup>2</sup>	35	==>						
<b>machine pressure:</b>	bar	55	==>						
<b>sintering time:</b>	min	3	==>						
<b>bending strength:</b>	N/mm <sup>2</sup>								
<b>stretch at break:</b>	%								
<b>average hardness:</b>	HRB	99	104	106	106	106	106	105	104
<b>hardness scattering:</b>	HRB	98-101	104-105	106-107	106-107	106-107	105-106	105-106	104-105
<b>weight:</b>	g	17	==>						
<b>weight after sintering:</b>	g	17,091	16,709	17,011	16,951	16,706	16,462	16,89	16,787

<b>volume:</b>									
<b>V = G<sub>s</sub> - G<sub>w</sub></b>	cm <sup>3</sup>	2,057	1,943	1,951	1,937	1,91	1,885	1,937	1,93
<b>density:</b>									
<b>D = G<sub>s</sub> / V</b>	g/cm <sup>3</sup>	8,31	8,60	8,72	8,75	8,75	8,73	8,72	8,70

<b>weight loss:</b>									
<b>G = G<sub>e</sub> - G<sub>s</sub></b>	g								
<b>rel. Weight loss:</b>									
<b>Gr = G * 100 / G<sub>e</sub></b>	%								

<b>notes:</b>	700 °C: 92 HRB (90-95); 7.92 g/cm <sup>3</sup>
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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 !

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