Die in diesen beiden Tabelle enthaltenen Werkstoffe stellen die für die Pulvermetallurgie gängigsten Werkstoffe mit Ihren mechanischen Eigenschaften dar. Daneben gibt es jedoch für jeden spezifischen Anwendungsbereich eine Vielzahl weiterer Werkstoffe und Legierungsmöglichkeiten.

La tabelle suivante présente les principales poudres utilisées pour la fabrication de pièces en métal fritté. Toutefois, il existe d'autres métaux et de nombreuses possibilités d'alliages pour chaque application spécifique.

SINTERMETALLE FÜR FORMTEILE (DIN 30910-4) / METALS FOR SINTERED PARTS (DIN 30910-4) / MÉTAUX POUR PIÈCES FRITTÉES (DIN 30910-4)

Material		Short sign	Tolerated ranges											Representativ examples												
			Density	Porosity	Chemical composition (mass share)								Hard-ness	Density	Chemical composition (mass share)								Tensile strenght	Yield stress	Breaking tension	Hard-ness	Elastic module
		Sint-	ϱ	$\frac{\Delta V}{V} \cdot 100$	C	Cu	Ni	Mo	Sn	P	Fe	Other	HB	ϱ	C	Cu	Ni	Mo	Sn	P	Fe	Other	R_m	$R_{p\,0.1}$	A	HB	E·10³
			g/cm³	%	%	%	%	%	%	%	%	%		g/cm³	%	%	%	%	%	%	%	%	N/mm²	N/mm²	%		N/mm²
sintered iron		**C 00** **D 00** **E 00**	6.4 to 6.8 6.8 to 7.2 > 7.2	15 +/- 2.5 10 +/- 2.5 < 7.5	< 0.3	< 1	-	-	-	-	Rest	< 2	**> 35** **> 45** **> 60**	6.6 6.9 7.3	-	-	-	-	-	-	Rest	< 0.5	130 190 260	60 90 130	4 10 18	**40** **50** **65**	100 130 160
sintered steel	carboniferous	**C 01** **D 01**	6.4 to 6.8 6.8 to 7.2	15 +/- 2.5 10 +/- 2.5	0.3 to 0.6	< 1	-	-	-	-	Rest	< 2	**> 70** **> 90**	6.6 6.9	0.5	-	-	-	-	-	Rest	< 0.5	260 320	180 210	3 3	**80** **100**	100 130
	cupriferous	**C 10** **D 10** **E10**	6.4 to 6.8 6.8 to 7.2 > 7.2	15 +/- 2.5 10 +/- 2.5 < 7.5	< 0.3	1 to 5	-	-	-	-	Rest	< 2	**> 40** **> 50** **> 80**	6.6 6.9 7.3	-	1.5	-	-	-	-	Rest	< 0.5	230 300 400	160 210 290	3 6 12	**55** **85** **120**	100 130 160
	cupriferous, carboniferous	**C 11** **D 11**	6.4 to 6.8 6.8 to 7.2	15 +/- 2.5 10 +/- 2.5	0.4 to 1.5	1 to 5	-	-	-	-	Rest	< 2	**> 80** **> 95**	6.6 6.9	0.6	1.5	-	-	-	-	Rest	< 0.5	460 570	320 400	2 2	**125** **150**	100 130
		C 21	6.4 to 6.8	15 +/- 2.5		5 to 10	-	-	-	-	Rest	< 2	**> 105**	6.6	0.8	6	-	-	-	-	Rest	< 0.5	530	410	< 1	**150**	100
	cupriferous, nickeliferous and molybdeniferous	**C 30** **D 30** **E 30**	6.4 to 6.8 6.8 to 7.2 > 7.2	15 +/- 2.5 10 +/- 2.5 < 7.5	< 0.3	1 to 5	1 to 5	< 0.8	-	-	Rest	< 2	**> 55** **> 60** **> 90**	6.6 6.9 7.3	0.3	1.5	4	0.5	-	-	Rest	< 0.5	390 510 680	310 370 440	2 3 5	**105** **130** **170**	100 130 160
	phosphoric	**C 35** **D 35**	6.4 to 6.8 6.8 to 7.2	15 +/- 2.5 10 +/- 2.5	< 0.3	< 1	-	-	-	0.3 to 0.6	Rest	< 2	**> 70** **> 80**	6.6 6.9	-	-	-	-	-	0.45	Rest	< 0.5	310 330	200 230	11 12	**85** **90**	100 130
	cupriferous, phosphoric	**C 36** **D 36**	6.4 to 6.8 6.8 to 7.2	15 +/- 2.5 10 +/- 2.5	< 0.3	1 to 5	-	-	-	0.3 to 0.6	Rest	< 2	**> 80** **> 90**	6.6 6.9	-	2	-	-	-	0.45	Rest	< 0.5	360 380	290 320	5 6	**100** **105**	100 130
	cupri-, nickel-, molybden- and carboniferous	**C 39** **D 39**	6.4 to 6.8 6.8 to 7.2	15 +/- 2.5 10 +/- 2.5	0.3 to 0.6	1 to 3	1 to 5	< 0.8	-	-	Rest	< 2	**> 90** **> 120**	6.6 6.9	0.5	1.5	4	0.5	-	-	Rest	< 0.5	520 600	370 420	1 2	**150** **180**	100 130
stainless steel	AISI 316	**C 40** **D 40**	6.4 to 6.8 6.8 to 7.2	15 +/- 2.5 10 +/- 2.5	< 0.08	-	10 to 14	2 to 4	-	Cr 16 to 19	Rest	< 2	**> 95** **> 125**	6.6 6.9	0.06	-	13	2.5	-	Cr 18	Rest	< 0.5	330 400	250 320	1 2	**110** **135**	100 130
	AISI 430	**C 42**	6.4 to 6.8	15 +/- 2.5	< 0.08	-	-	-	-	Cr 16 to 19	Rest	< 2	**> 140**	6.6	0.06	-	-	-	-	Cr 18	Rest	< 0.5	420	330	1	**170**	100
	AISI 410	**C 43**	6.4 to 6.8	15 +/- 2.5	0.1 to 0.3	-	-	-	-	Cr 11 to 13	Rest	< 2	**> 165**	6.6	0.2	-	-	-	-	Cr 13	Rest	< 0.5	510	370	1	**180**	100
sintered bronze		**C 50** **D 50**	7.2 to 7.7 7.7 to 8.1	15 +/- 2.5 10 +/- 2.5	-	Rest	-	-	9 to 11	-	-	< 2	**> 35** **> 45**	7.4 7.9	-	Rest	-	-	10	-	-	< 0.5	150 220	90 120	4 6	**40** **55**	50 70
sintered aluminium		**D 73** **E 73**	2.45 to 2.55 2.55 to 2.65	10 +/- 2.5 6 +/- 1.5	-	4 to 6	Mg < 1	Si < 1	Al Rest	-	-	< 2	**> 45** **> 55**	2.5 2.6	-	4.5	Mg 0.6	Si 0.7	-	-	Al Rest	< 0.5	160 200	130 150	1 2	**50** **60**	50 60

MWST/TVA: 132 947
ISO Reg.-Nr. 10678

Meyer Sintermetall AG
Worbenstrasse 20

CH-2557 Studen (BE)
Switzerland

Tel. +41 (0)32 373 11 11
Fax +41 (0)32 373 40 28

info@sintermetall.ch
www.sintermetall.ch

meyersintermetall
swiss powdermetal solutions