

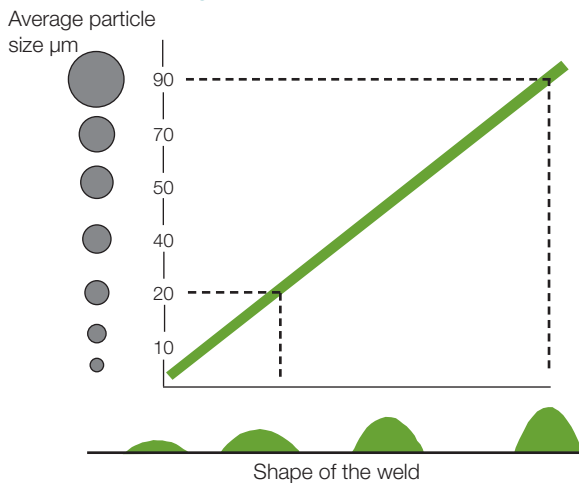
Powder welding grades

Nickel-base	Particle size µm	C %	Si %	B %	Fe %	Cr %	Ni %	Mo %	Others %	Hardness		Recommended use/Features/Comments
										HRC	HV ₃₀	
1015-00	20-106	0.03	2.0	1.1	0.5	-	Bal.	-	Cu=20.0	15*	210**	Repair of cast iron, e.g. engine blocks.
1020-00	20-106	0.03	2.4	1.4	0.4	-	Bal.	-	-	20*	230**	Welding on new cast iron surfaces. Repair of machining errors. Repair of engine blocks, bearings, threads, wing pumps and press tools.
1021-10	20-106	0.03	2.0	0.65	0.3	3.0	Bal.	-	P=2.0	21*	250**	Improved fluidity, lower melting point.
1623-05	10-53	0.04	2.5	1.6	0.4	-	Bal.	-	-	23*	270**	Easy to machine. Can be filed by hand.
1025-40	20-106	0.05	2.7	1.8	0.4	-	Bal.	-	-	28*	295**	
1031-10	20-106	0.03	2.2	0.9	0.3	3.0	Bal.	-	P=2.2	28*	290**	Improved fluidity, lower melting point.
1035-40	20-106	0.32	3.7	1.2	3.0	7.0	Bal.	-	-	35*	360**	Repair and build-up of small plungers and neck-rings in the glass bottle manufacturing industry.
1135-40	20-71											
1036-40	20-106	0.15	2.8	1.2	0.4	4.5	Bal.	2.5	P=1.9	36*	375**	Improved fluidity, lower melting point.
1040-00	20-106	0.25	3.5	1.6	2.5	7.5	Bal.	-	-	40*	425**	Repair and build-up of worn parts for moulds, valves, bearings, splines, seal rings, valve gates, water pumps and sprockets.
1045-00	20-106	0.35	3.7	1.8	2.6	8.9	Bal.	-	-	47**	500**	Good fluidity.
1050-00	20-106	0.45	3.9	2.3	2.9	11.0	Bal.	-	-	52**	580**	All applications with high demand on wear and corrosion resistance, e.g. rocker arms, bearings, diesel engine valves, crusher rolls, conveyor screws, fan blades, textile spindles, pistons, pump shafts, agricultural arms and mixer blades.
1060-00	20-106	0.75	4.3	3.1	3.7	14.8	Bal.	-	-	62**	810**	Further improvement of wear resistance can be obtained by mixing with carbides.

* Indicative value
** Measured value

Recommended use
Features
Comments

Powder welding - particle size effect on weld shape



Effect of B+Si on fluidity and hardness

