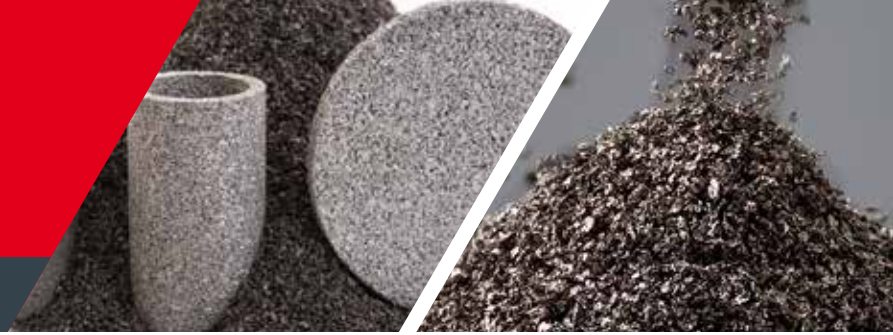


HASTELLOY® B POWDER

TECHNICAL DATASHEET



HASTELLOY® B POWDER

AMETEK offers several different Hastelloy® alloys in powder form, including but not limited to C-22, C-276, B, and X alloys. They are nickel based and used in applications where the corrosion resistance or service temperature of stainless steels is insufficient.

HASTELLOY® B

Hastelloy® B alloys are nickel-molybdenum based and used in extremely reducing and acidic environments with unparalleled performance in such conditions. The primary application of powders of Hastelloy is in sintered metal filters.

Molybdenum is the primary alloying element which gives extremely high resistance to hydrogen chloride gas, sulfuric, acetic and hydrochloric acids in all concentrations and temperatures. It exhibits enhanced structural stability compared with previous B-type alloys, an advantage during welding and fabrication.

Hastelloy® B is ductile and can be formed and welded easily.

MARKETS

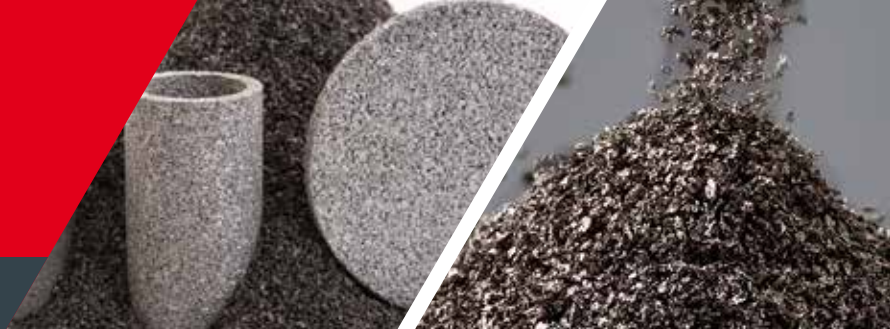
- Chemical Process
- Oil & Gas
- Geothermal
- LNG (Liquefied Natural Gas)
- Petrochemical
- Pharmaceutical
- Sea Water
- Nuclear Power

CHEMICAL COMPOSITION %

Alloy	Ni	Co	Cr	Mo	Fe	W	Mn	V	Si	C	Cu	Nb	B	Al	Ti	Ta	Zr
B	65 min	3 max	1.5	28.5	1.5	3 max	3 max	0.2 max	0.1 max	0.01 max	0.2 max	0.2 max	0.2 max	0.5 max	0.2 max	0.2 max	0.01 max

HASTELLOY® B POWDER

TECHNICAL DATASHEET



HASTELLOY® B BULK PROPERTIES

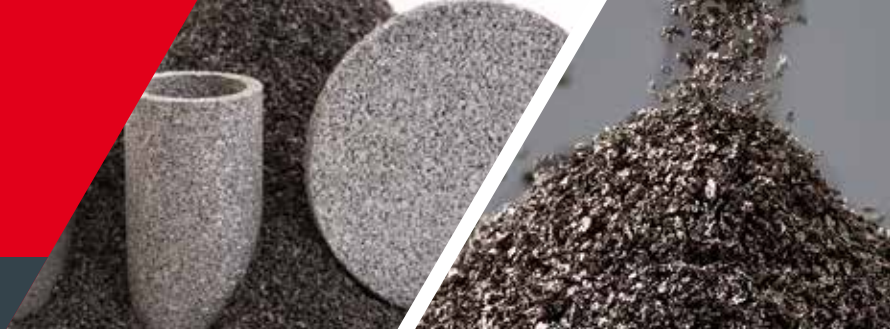
PHYSICAL PROPERTIES				
Physical Property	Imperial units		Metric Units	
Density	RT	0.333 lb/in ³	RT	9.22 g/cm ³
Electrical Resistivity	RT	53.8 μohm-in	RT	1.37 μohm.m
	200°F	53.9 μohm.in	100°C	1.37 μohm.m
	400°F	54.1 μohm.in	200°C	1.37 μohm.m
	600°F	54.3 μohm.in	300°C	1.38 μohm.m
	800°F	54.4 μohm.in	400°C	1.38 μohm.m
	1000°F	55.4 μohm.in	500°C	1.40 μohm.m
	1200°F	57.5 μohm.in	600°C	1.43 μohm.m
Thermal Conductivity	RT	78 Btu.in/h.ft ² .°F	RT	11.2 W/m.°C
	200°F	83 Btu.in/h.ft ² .°F	100°C	12.1 W/m.°C
	400°F	93 Btu.in/h.ft ² .°F	200°C	13.4 W/m.°C
	600°F	104 Btu.in/h.ft ² .°F	300°C	14.8 W/m.°C
	800°F	116 Btu.in/h.ft ² .°F	400°C	16.3 W/m.°C
	1000°F	129 Btu.in/h.ft ² .°F	500°C	17.9 W/m.°C
	1200°F	142 Btu.in/h.ft ² .°F	600°C	19.6 W/m.°C
Mean Coefficient of Thermal Expansion	77 - 200°F	5.7 μin/in.°F	25 - 100°C	10.6 μm/m.°C
	77 - 400°F	6.1 μin/in.°F	25 - 200°C	11.1 μm/m.°C
	77 - 600°F	6.3 μin/in.°F	25 - 300°C	11.4 μm/m.°C
	77 - 800°F	6.5 μin/in.°F	25 - 400°C	11.6 μm/m.°C
	77 - 1000°F	6.6 μin/in.°F	25 - 500°C	11.8 μm/m.°C
	77 - 1200°F	6.5 μin/in.°F	25 - 600°C	11.8 μm/m.°C

RT = Room Temperature

Data shown for Physical Properties sourced from Haynes International, Inc.

HASTELLOY® B POWDER

TECHNICAL DATASHEET



HASTELLOY® B BULK PROPERTIES (CONTINUED)

PHYSICAL PROPERTIES				
Physical Property	Imperial units		Metric Units	
Specific Heat	RT	0.089 Btu/lb.°F	RT	373 J/kg.°C
	200°F	0.092 Btu/lb.°F	100°C	382 J/kg.°C
	400°F	0.098 Btu/lb.°F	200°C	409 J/kg.°C
	600°F	0.102 Btu/lb.°F	300°C	421 J/kg.°C
	800°F	0.104 Btu/lb.°F	400°C	431 J/kg.°C
	1000°F	0.104 Btu/lb.°F	500°C	436 J/kg.°C
	1200°F	0.112 Btu/lb.°F	600°C	434 J/kg.°C
Dynamic Modulus of Elasticity	RT	31.4 x 10 ⁶ psi	RT	216 GPa
	200°F	30.9 x 10 ⁶ psi	100°C	213 GPa
	400°F	30.1 x 10 ⁶ psi	200°C	208 GPa
	600°F	29.3 x 10 ⁶ psi	300°C	202 GPa
	800°F	28.3 x 10 ⁶ psi	400°C	197 GPa
	1000°F	27.2 x 10 ⁶ psi	500°C	190 GPa
	1200°F	26.5 x 10 ⁶ psi	600°C	185 GPa
Melting Range	2500 - 2585°F	-	1370 - 1418°C	-

RT = Room Temperature

Data shown for Physical Properties sourced from Haynes International, Inc.

EIGHTY FOUR / AMETEK®
SPECIALTY METAL PRODUCTS

1085 Route 519, Eighty Four, PA 15330, United States

E: EF.sales@ametek.com | T: (+1) 724-225-8400

www.powderclad.com

The data herein are subject to revision without notice. Since AMETEK products, and the information given and recommendations made herein, may be used under conditions beyond our control, AMETEK makes no guarantee, either express or implied, concerning the sustainability of our products, or the applicability and accuracy of the information, or recommendations, in any specific situation. User is solely responsible for determining the suitability of AMETEK products of any specific purpose.