

Ametek P409L/409CB P/M Stainless Steel, Sintered from 6.45 g/cc Green Density

Category : Metal , Ferrous Metal , Stainless Steel , T 400 Series Stainless Steel

Material Notes:

P409L/409CB is a ferritic, weldable grade of stainless steel high compressibility, enhanced green strength and good sinterability. This stabilized grade provides excellent corrosion resistance and has the capacity to provide high-caliber mechanical properties due to the high-temperature sintering response. P409L/409CB's versatility also results from Cb being less prone to oxidation than Ti. In addition, the oxide is unable to combine with carbon and the Cb forms a stable carbide which prevents coarsening of carbides and grains in the weld's heat-affected zone. P409L/409CB may be used in automotive exhaust system applications, among other uses. For property data reported here: Compacting properties measured on powders with 1% lithium stearate. Sintering was done in dissociated ammonia at 1121°C (2050°F) for 45 minutes. Compacting pressure 40 tsi. Green strength 1800 psi. Sintered breaking strength 105,000 psi. Information provided by Ametek Specialty Metal Products.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ametek-P409L409CB-PM-Stainless-Steel-Sintered-from-645-gcc-Green-Density.php

Physical Properties	Metric	English	Comments
Bulk Density	2.90 g/cc	0.105 lb/in ³	Powder
Density	6.55 g/cc	0.237 lb/in ³	Sintered

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	71	71	
Tensile Strength, Ultimate	372 MPa	54000 psi	
Elongation at Break	4.8 %	4.8 %	

Thermal Properties	Metric	English	Comments
Shrinkage	0.28 %	0.28 %	versus die size

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.030 %	<= 0.030 %	
Chromium, Cr	10.5 - 11.75 %	10.5 - 11.75 %	
Iron, Fe	84.35 - 89.1 %	84.35 - 89.1 %	As Remainder
Manganese, Mn	<= 2.0 %	<= 2.0 %	
Niobium, Nb (Columbium, Cb)	0.40 - 0.80 %	0.40 - 0.80 %	
Phosphorous, P	<= 0.040 %	<= 0.040 %	

Component Elements Properties	Metric	English	Comments
Sulfur, S	<= 0.030 %	<= 0.030 %	

Descriptive Properties	Value	Comments
Powder Flow	30 sec/50 g	

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