

Kennametal Stellite Stellite® 31 PM cast

Category : Metal , Nonferrous Metal , Cobalt Alloy , Superalloy

Material Notes:

Typical applications include vane plugs, fuel metering pins, spacer bushings, ball bearing blanks, race bearing blanks, diesel engine exhaust, fluid valve seats, saw cutter inserts, miscellaneous wear parts. Data provided by the manufacturer, Deloro Stellite Inc. Product of former Deloro Stellite Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Kennametal-Stellite-Stellite-31-PM-cast.php

Physical Properties	Metric	English	Comments
Density	8.45 g/cc	0.305 lb/in ³	P/M (98%)
	8.61 g/cc	0.311 lb/in ³	Theoretical

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	745 MPa	108000 psi	
	436 MPa	63200 psi	
	@Temperature 760 Â°C	@Temperature 1400 Â°F	
	521 MPa	75600 psi	
	@Temperature 649 Â°C	@Temperature 1200 Â°F	
	552 MPa	80100 psi	
	@Temperature 538 Â°C	@Temperature 1000 Â°F	
Tensile Strength, Yield	526 MPa	76300 psi	
	@Strain 0.200 %	@Strain 0.200 %	
	280 MPa	40600 psi	
	@Strain 0.200 %, Temperature 538 Â°C	@Strain 0.200 %, Temperature 1000 Â°F	
Elongation at Break	9.0 %	9.0 %	in 25.4 mm
	12 %	12 %	
	@Temperature 649 Â°C	@Temperature 1200 Â°F	in 25.4 mm
	15 %	15 %	
	@Temperature 760 Â°C	@Temperature 1400 Â°F	in 25.4 mm

Mechanical Properties	Metric	English	Comments
	@Temperature 538 Â°C	@Temperature 1000 Â°F	in 25.4 mm

Thermal Properties	Metric	English	Comments
CTE, linear	14.1 Âµm/m-Â°C	7.83 Âµin/in-Â°F	
	@Temperature 21.0 - 316 Â°C	@Temperature 69.8 - 601 Â°F	
	14.5 Âµm/m-Â°C	8.06 Âµin/in-Â°F	
	@Temperature 21.0 - 427 Â°C	@Temperature 69.8 - 801 Â°F	
	15.1 Âµm/m-Â°C	8.39 Âµin/in-Â°F	
	@Temperature 21.0 - 538 Â°C	@Temperature 69.8 - 1000 Â°F	
	15.7 Âµm/m-Â°C	8.72 Âµin/in-Â°F	
@Temperature 21.1 - 649 Â°C	@Temperature 70.0 - 1200 Â°F		
16.5 Âµm/m-Â°C	9.17 Âµin/in-Â°F		
@Temperature 21.1 - 816 Â°C	@Temperature 70.0 - 1500 Â°F		
16.6 Âµm/m-Â°C	9.22 Âµin/in-Â°F		
@Temperature 21.1 - 871 Â°C	@Temperature 70.0 - 1600 Â°F		

Component Elements Properties	Metric	English	Comments
Carbon, C	0.50 %	0.50 %	
Chromium, Cr	25.5 %	25.5 %	
Cobalt, Co	50 %	50 %	As remainder
Iron, Fe	<= 2.0 %	<= 2.0 %	
Manganese, Mn	<= 1.0 %	<= 1.0 %	
Nickel, Ni	10.5 %	10.5 %	
Other	<= 2.0 %	<= 2.0 %	
Phosphorous, P	<= 0.040 %	<= 0.040 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	
Sulfur, S	<= 0.040 %	<= 0.040 %	

Component Elements Properties	Metric	English	Comments
Tungsten, W			

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