

## Kennametal Stellite Deloro<sup>®</sup> N-6 PM with P/M Processing

Category : Metal , Nonferrous Metal , Nickel Alloy , Superalloy

### Material Notes:

Adhesive wear test data: P/M 0.1, cast 0.1; Abrasive wear test data: P/M 17, cast 35. 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-Deloro-N-6-PM-with-PM-Processing.php](http://www.lookpolymers.com/polymer_Kennametal-Stellite-Deloro-N-6-PM-with-PM-Processing.php)

Physical Properties	Metric	English	Comments
Density	8.19 g/cc	0.296 lb/in <sup>3</sup>	P/M (98%)
	8.48 g/cc	0.306 lb/in <sup>3</sup>	Theoretical

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	284	284	Converted from Rockwell C hardness.
	155	155	Converted from Rockwell B hardness
	@Temperature 760 Â°C	@Temperature 1400 Â°F	
Hardness, Brinell	228	228	Converted from Rockwell C hardness
	@Temperature 649 Â°C	@Temperature 1200 Â°F	
	354	354	Converted from Rockwell C hardness
	@Temperature 538 Â°C	@Temperature 1000 Â°F	
Hardness, Knoop	337	337	Converted from Rockwell C hardness.
	179	179	Converted from Rockwell B hardness
	@Temperature 760 Â°C	@Temperature 1400 Â°F	
Hardness, Knoop	268	268	Converted from Rockwell C hardness
	@Temperature 649 Â°C	@Temperature 1200 Â°F	
	299	299	Converted from Rockwell C hardness
	@Temperature 538 Â°C	@Temperature 1000 Â°F	
Hardness, Rockwell A	65	65	Converted from Rockwell C hardness.
		50	

Mechanical Properties	Metric	English	Comments
	@Temperature 760 Å°C	@Temperature 1400 Å°F	Converted from Rockwell B hardness
	60	60	
	@Temperature 649 Å°C	@Temperature 1200 Å°F	Converted from Rockwell C hardness
	63	63	
	@Temperature 538 Å°C	@Temperature 1000 Å°F	Converted from Rockwell C hardness
Hardness, Rockwell B	105	105	Converted from Rockwell C hardness. Beyond normal Rockwell B range, for comparison only.
	82	82	
	@Temperature 760 Å°C	@Temperature 1400 Å°F	Hot hardness
	98	98	
	@Temperature 649 Å°C	@Temperature 1200 Å°F	Converted from Rockwell C hardness
Hardness, Rockwell C	30	30	Hot hardness.
	20	20	
	@Temperature 649 Å°C	@Temperature 1200 Å°F	Hot hardness.
	25	25	
	@Temperature 538 Å°C	@Temperature 1000 Å°F	Hot hardness.
Hardness, Vickers	294	294	Converted from Rockwell C hardness.
	157	157	
	@Temperature 760 Å°C	@Temperature 1400 Å°F	Converted from Rockwell B hardness
	234	234	
	@Temperature 649 Å°C	@Temperature 1200 Å°F	Converted from Rockwell C hardness
	261	261	
	@Temperature 538 Å°C	@Temperature 1000 Å°F	Converted from Rockwell C hardness
Tensile Strength, Ultimate	656 MPa	95100 psi	
	428 MPa	62100 psi	
	@Temperature 760 Å°C	@Temperature 1400	

Mechanical Properties	Metric	English	Comments
	545 MPa	79000 psi	
	@Temperature 538 Â°C	@Temperature 1000 Â°F	
	545 MPa	79000 psi	
	@Temperature 649 Â°C	@Temperature 1200 Â°F	
Elongation at Break	2.0 %	2.0 %	in 25.4 mm
	3.0 %	3.0 %	
	@Temperature 538 Â°C	@Temperature 1000 Â°F	in 25.4 mm
	4.0 %	4.0 %	
	@Temperature 649 Â°C	@Temperature 1200 Â°F	in 25.4 mm
	7.0 %	7.0 %	
	@Temperature 760 Â°C	@Temperature 1400 Â°F	in 25.4 mm
Modulus of Elasticity	200 GPa	29000 ksi	

Component Elements Properties	Metric	English	Comments
Boron, B	0.60 %	0.60 %	
Carbon, C	1.1 %	1.1 %	
Chromium, Cr	29 %	29 %	
Cobalt, Co	<= 3.0 %	<= 3.0 %	
Iron, Fe	<= 3.0 %	<= 3.0 %	
Manganese, Mn	<= 1.0 %	<= 1.0 %	
Molybdenum, Mo	5.5 %	5.5 %	
Nickel, Ni	54 %	54 %	As Remainder
Silicon, Si	<= 1.5 %	<= 1.5 %	
Tungsten, W	2.0 %	2.0 %	

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