

## Kinetics MIM F15 (Kovar<sup>®</sup>,ç) Low CTE Alloy

Category : Metal , Electronic/Magnetic Alloy , Superalloy , Iron Base

### Material Notes:

High nickel, high cobalt iron alloy. A traditional metal-to- glass sealing alloy that offers a low coefficient of thermal expansion (CTE) similar to glass. Provides the hermeticity required for firmly bonding between metal and glass. Frequently used for hermetic enclosures or packages used to protect electronic or optical devices in aerospace, automotive, optical, optoelectronic, and telecommunication industries. Property values reported are typical for Kinetics' MIM products. Metal Injection Molding General Notes: Fine metal powders (generally

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Kinetics-MIM-F15-Kovar-Low-CTE-Alloy.php](http://www.lookpolymers.com/polymer_Kinetics-MIM-F15-Kovar-Low-CTE-Alloy.php)

Physical Properties	Metric	English	Comments
Density	7.85 g/cc	0.284 lb/in <sup>3</sup>	Sintered

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	64.1	64.1	
Tensile Strength, Ultimate	427 MPa	62000 psi	
Tensile Strength, Yield	276 MPa	40000 psi	
Elongation at Break	30 %	30 %	in 1 inch
Charpy Impact, Unnotched	102 J	75.0 ft-lb	1/2 size bar

Thermal Properties	Metric	English	Comments
CTE, linear	5.10 - 5.50 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 20.0 - 450 $\text{Å}^\circ\text{C}$	2.83 - 3.06 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 68.0 - 842 $\text{Å}^\circ\text{F}$	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.040 %	0.040 %	
Cobalt, Co	17 %	17 %	
Iron, Fe	54 %	54 %	by difference
Nickel, Ni	29 %	29 %	

Descriptive Properties	Value	Comments
Surface Finish	32 Ra	

## **Contact Songhan Plastic Technology Co.,Ltd.**

**Website : [www.lookpolymers.com](http://www.lookpolymers.com)**

**Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)**

**Tel : +86 021-51131842**

**Mobile : +86 13061808058**

**Skype : lookpolymers**

**Address : United North Road 215,Fengxian District, Shanghai City,China**