

Meldin Grades	Material Name	7001	7021	7022	7211	7003
	Color	Gold	Black	Black	Black	Black
Characteristics	Key highlights	Thermal stability, high strength, dielectric insulator, minimal outgassing in vacuum, ductile, cryo to 600°F continuous.	Very low friction and best wear properties for seals and bearings, thrust washers, piston rings. Excellent strength at high temps.	Best temperature stability and lowest thermal expansion rate of all Meldin® grades. Excellent high temperature structural option for metals.	Excellent bearing grade up to 300°F, k factor drops above that and 7021 is better wearing option above 300°F. Very low friction.	Best for service in vacuum and in extreme dry conditions. Commonly used as seals, seats, bearings, in space applications.
Composition & Manufacturing Methods	Base Resin	Polyimide (PI)				
	Fillers	Unfilled Base Resin	15% Graphite	40% Graphite	15% Graphite, 10% PTFE	15% Molybdenum Disulfide
	Shape Availability	Rod, sheet, finished parts Up to 37" rod, 12 x 12 sheets Tubes, Discs, Blocks				
	MFG Method DF	x	x	x	x	x
	MFG Method HCM	x	x	x	x	x
	MFG Method Isostatic Molding	x	x	x	x	x
Mechanical	Tensile Strength (psi)	12500	9500	8000	7500	9200
	Elongation (%)	8.0	4.7	3.0	4.0	5.5
	Flexural Strength (psi)	15800	15800	13000	11800	13000
	Flexural Modulus (psi x 10 ⁵)	4.6	5.3	7.7	5.0	4.6
	Compressive Modulus (psi x 10 ⁵)	3.8	4.5	4.8	3.5	3.6
	Max "PV" (psi-ft/min)	N/A	300,000	300,000	300,000	N/A
Thermal	Max Use Temp	600°F*	600°F*	600°F*	600°F*	600°F*
	Tg (Glass Transition Temp.)	Has no Tg**	Has no Tg**	Has no Tg**	Has no Tg**	Has no Tg**
	Thermal Conductivity (BTU in/hr ft ² °F)	2.4	5.0	–	5.2	–
	CTE – 73 to 500°F (in/in/°F)	2.7	2.2	1.4	2.4	–
Electrical	Dielectric Strength (V/mil)	580	280	–	–	–
	Surface Resistivity (Ohm-Sq)	0.23 / 0.64	0.50 / 0.10	–	–	–
Other	Specific Gravity	1.43	1.51	1.65	1.53	1.61
	Hardness (Rockwell E)	40-55	25-40	5-20	1-15	–
	Water absorption 24hr / 48hr (%)	0.23 / 0.64	0.50 / 0.10	–	–	–

* Intermittent exposure to 900°F

** Meldin® 7000 has no softening point. TGA tests show it burns off less than 5% by weight up to temperatures of 1112°F.

The list above is only a partial list of available Meldin® materials.

We're ready to put our engineering expertise to work for you from prototype to production.

Engineering | Custom Fabrication | Manufacturing



CJ Composite

- Self-Lubricating
- Low weight | High Strength
- Chemical Resistance
- Direct replacement for Bronze



Ultracomp[®]

- Self-Lubricating
- High Load | Low Speed
- High Compressive Strength
- Vibration & Impact Resistance



TriSteel[™]

- Self-Lubricating
- High Load | High Speed
- Metal Backed Bearing System
- 100% Lead Free



Rulon[®]

- Self-Lubricating
- Low weight | High Strength
- Low Coefficient of Friction
- Chemically Resistant



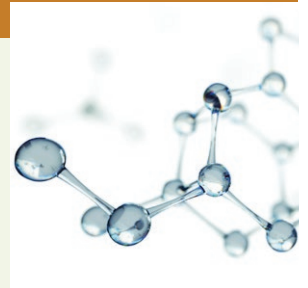
Meldin[®]

- High Performance Materials
- High Temp Dimensional Stability
- Chemical Resistance
- Withstands Thermal Shocks



Enhanced Materials

- Plasma Surface Treatment
- Filtration Membranes
- Specialized Primers & Coatings
- Material ID & Selection



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