

# Compression Molded Shapes

## ULTRA-HIGH PERFORMANCE THERMOPLASTIC SHAPES FROM THE TECHNOLOGY LEADER

Compression Molded Thermoplastic Shapes manufactured by Polymics, Ltd. provide engineers and machinists with the quality and performance required for the most demanding applications. Our attention to cleanliness and our proprietary low stress processing methods assure our customers the defect free and dimensionally stable products that they require. Customers in the highest technology industries like, Semi-Conductor Processing, Oil and Gas Exploration, and Pharmaceutical Manufacturing depend on Polymics' Compression Molded Stock Shapes.

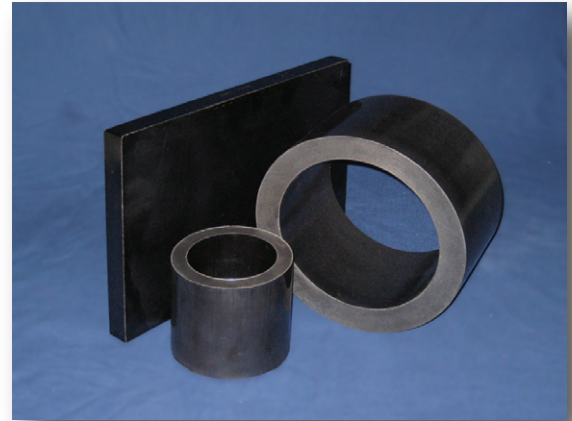
Most users of thermoplastic High Performance Materials (HPM's) have found that Compression Molded Shapes are the most economical option because this process offers the widest range of near net sizes and materials with the lowest minimum order quantities. For users of HPM thermoplastic shapes, this means they can buy exactly the material they need in the near net shape and size they need without paying additional charges for tooling or small run set-ups.

Polymics, Ltd. offers premium performance thermoplastic materials like PEI, PPS, PEEK, Polyimide, and PBI in both standard (see reverse side) and customer specified custom formulations. Please contact Polymics' Customer Service Department for a quote on the materials and shapes you need.

### STANDARD SIZES/SHAPES OFFERED:

- **Compression Molded Plate:** 10"x10", 12"x12", 15"x10.5", and 18"x12" in thicknesses of up to 2.0"
- **Rod Machined from Compression Molded Plate:** Diameters up to 2" and lengths up to 18" long
- **Compression Molded Rod:** Diameters from 2.5" to 5.0" in lengths up to 6" long
- **Compression Molded Discs:** Diameters from 4.0" to 15.0" in thicknesses up to 3.0"
- **Compression Molded Tubes:** Outer Diameters up to 15.0" and wall thicknesses up to 3.0"

Polymics, Ltd. is the world's premier developer and manufacturer of ultra-high performance engineering plastics for an infinite variety of engineered end uses. We are a technology focused company that offers a truly unique combination of expertise in product development, application engineering, and innovative polymer processing. Polymics' capabilities include the synthesis and polymerization of custom materials, material testing, resin compounding, compression molding, injection molding, and fabrication of finished components. Polymics, Ltd. has the expertise and manufacturing capabilities to provide end users with one stop "problem to finished part" solutions. Polymics, Ltd. offers its products to customers in the western hemisphere through its sales and manufacturing location in State College, PA and to customers in Asia/Pacific through its Applied Polymer Materials, Inc. subsidiary near Taipei, Taiwan.



*Polymics, Ltd.*

High Performance Polymers & Compounds

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# STANDARD COMPRESSION MOLDED STOCK SHAPE MATERIALS FROM POLYMICS, LTD.

## CELAZOLE® POLYBENZIMIDAZOLE (PBI) PRODUCTS

Celazole® PBI U-60	Unfilled PBI
Celazole® PBI-CF	Carbon Fiber reinforced PBI
Celazole® PBI-ESD	Electro-Static Dissipative PBI (10 <sup>3</sup> -10 <sup>6</sup> ohms-sq.)
Celazole® TU-60	Celazole® T-Series®

## PYRAMID® POLYIMIDE (PI) PRODUCTS

Pyramid® PI 010	Unfilled Polyimide
Pyramid® PI 210	15% Graphite lubricated Polyimide

## PYRAMID® POLYETHERKETONEKETONE (PEKK) PRODUCTS

Pyramid® KA 2000	Unfilled Amorphous PEKK
Pyramid® KC 2000	Unfilled Crystalline PEKK
Pyramid® KC 1500	PTFE lubricated Crystalline PEKK
Pyramid® KC 1510	PTFE lubricated Crystalline PEKK – Very Low Coefficient of Friction
Pyramid® KC 2150	30% Glass Fiber reinforced Crystalline PEKK
Pyramid® KC 2270	40% Carbon Fiber reinforced Crystalline PEKK
Pyramid® KC 2219	Wear Grade Crystalline PEKK

## PYRAMID® POLYETHERETHERKETONE (PEEK) PRODUCTS

Pyramid® KD 2000	Unfilled PEEK
Pyramid® KD 2151	30% Glass Fiber reinforced PEEK
Pyramid® KD 2150 PP	30% Glass Fiber reinforced PEEK – Premium Performance <sup>(1)</sup>
Pyramid® KD 2251	30% Carbon Fiber reinforced PEEK
Pyramid® KD 2250 PP	30% Carbon Fiber reinforced PEEK – Premium Performance <sup>(1)</sup>
Pyramid® KD 2219	Wear Grade PEEK
Pyramid® CC 100	Highly Reinforced, Randomly Oriented, Long Carbon Fiber PEEK
Pyramid® CC 200	Highly Reinforced, Woven Carbon Fiber Cloth PEEK
Pyramid® CC 300	Highly Reinforced, Randomly Oriented, Very Long Carbon Fiber PEEK
Pyramid® CC 400	Highly Reinforced, Bi-Directional Carbon Fiber PEEK

## PYRAMID® POLYETHER-IMIDE (PEI)<sup>(2)</sup> PRODUCTS

Pyramid® II 2000	Unfilled PEI
Pyramid® II 2150	30% Glass Fiber reinforced PEI <sup>(3)</sup>
Pyramid® II 2250	30% Carbon Fiber reinforced PEI

## OTHER COMPRESSION MOLDED MATERIALS FROM POLYMICS, LTD.

Pyramid® SC 2000	Unfilled Polyphenylsulfone (Radel® PPSU)
Pyramid® SC 2150	30% Glass Fiber reinforced Polyphenylsulfone (Radel® PPSU)
Pyramid® SB 2000	30% Glass Fiber reinforced Polysulfone (PSU)
Pyramid® SE 2000	Unfilled Polyphenylene Sulfide (PPS)
Pyramid® SE 2219	Wear Grade Polyphenylene Sulfide (PPS)
Pyramid® TA 1150	30% Glass Fiber reinforced Polybutylene Terephthalate (Valox® 420 PBT)
Pyramid® TA 1151	30% Glass Fiber reinforced Polybutylene Terephthalate (Valox® 420SEO PBT)

(1) Compared with competitive compression molded products, Pyramid® KD 2150 PP and Pyramid® KD 2250 PP provide substantially improved strength and toughness. Please refer to the respective Polymics, Ltd. product datasheets for a complete review of the performance of these products.

(2) PEI is commonly referred to by the tradename Ultem®.

(3) PEI with glass filler levels from 5% – 40% are also available as standard product.

The materials listed here are standard commercial products offered by Polymics, Ltd. Polymics has the experience and capability to manufacture custom materials from an infinite range of thermoplastic resins and fillers. Please contact Polymics customer service with any questions or inquiries that you may have for materials not listed here.

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