

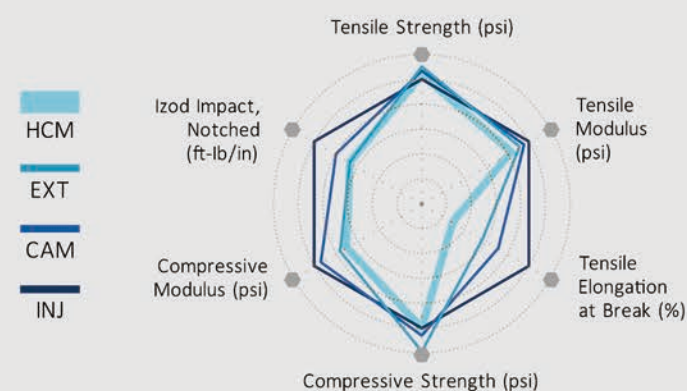


COMPRESSION MOLDING

Hot Compression Molded (HCM) Shapes manufactured by Polymics Ltd. provide materials and custom formulations that cannot be produced through other processing methods. Polymics enabling technologies not only provide “Concept To Solution” resins but also the ideal shape for our customer/partners most demanding applications.

Polymics produces; Plates, Rods, Tubes, Discs and Near-Net shapes in standard as well as custom materials through HCM. Our innovative and proprietary technologies have made us an industry leader in producing materials like PBI and other high heat polymers.

TYPICAL PROPERTY VARIATIONS BY PROCESS



Based on unfilled PEEK, processed by listed process mentioned in machine direction.

POLYMICS' STANDARD HCM POLYMERS

POLYKETONES	Pyramid™ PEEK	Unfilled, Glass-Filled, Carbon-Filled, Wear Grade PEEK Speciality Formulations
	Pyramid™ CC PEEK	Highly Reinforced Woven Carbon Fiber Cloth Reinforced, Highly Reinforced Randomly Oriented, and Long Carbon Fiber PEEK Composite Highest Strength PEEK Ts 80,000psi
	Arylmax® K PEKK	Amorphous and Semi-Crystalline Grade, Unfilled, Glass-Filled, Carbon-Filled, PTFE-Lubricated, and Wear Grade PEKK
CELAZOLE®	U-Series	Unfilled, Glass-Filled, Carbon-Fiber, ESD, and Increased Machinability PBI
	T-Series	Unfilled, Carbon-Fiber, Glass-Fiber, and Self-Lubricating Blends
OTHER POLYIMIDES	Pyramid™ PI	Unfilled and Graphite-Lubricated PI
	Ultem® PEI	Unfilled, Glass-Filled, and Carbon-Filled PEI
	PFA	Carbon-Filled
OTHER STANDARD MATERIALS	Pyramid™ PPS	Unfilled, Glass-Filled, and Wear Grade PPS
	Pyramid™ PPSU	Unfilled, Glass-Filled PPSU, and Carbon-Filled
	Valox® PBT	30% Glass-Fiber PBT

Pyramid is a registered trademark of Polymics, Ltd. Celazole is a registered trademark of PBI Performance Products, Inc. Valox and Ultem are registered trademarks of Sabic Innovative Plastics.

ADVANTAGES OF POLYMICS HCM

LOW MINIMUM ORDER QUANTITIES
ideal for testing or prototyping

WIDEST RANGE OF SIZE CAPABILITIES
covers thick cross section shapes not available with other processes

INNOVATIVE PROCESSING TECHNIQUES
offers hot compression molding (HCM), cold compression molding (CCM), and direct form process (DF)

EXTENSIVE MATERIAL PORTFOLIO
available in most thermoplastics & thermoset materials

PHYSICAL PROPERTIES SUPERIOR TO COMPETITION
combining polymer and processing expertise

LOWER STRESS
uniform properties

COMPRESSION MOLDING



POLYMICS' STANDARD THERMOPLASTIC SIZES / SHAPES

PLATES	5.0"x10.0", 10.0"x10.0", 12.0"x12.0", 15.0"x10.5", 18.0"x12.0", 24.0"x12.0"	
	Thicknesses from 0.25" to 2.0"	
RODS	As Molded	Diameters from 2.0" to 8.0"
		Lengths from 0.25" to 6.0"
	Dowelled (composite and thermoset)	Diameters up to 2.0"
TUBES		Lengths up to 24.0" (17.7" for PBI)
	Outer Diameters (OD) from 3.0" to 9.0" in Lengths of 3.0" to 6.0" with Wall Thicknesses up to 3.0"	
	Outer Diameters (OD) of 10.0" to 14.2" in Lengths of 5.0" to 6.0" with Wall Thicknesses up to 2.5"	
	Outer Diameter (OD) of 15.125" in Lengths from 0.5" to 1.5" with a Wall Thickness of 0.5"	
DISCS	Outer Diameter (OD) of 16.5" in Lengths of 5.0" with a Wall Thickness of 1.75"	
	Outer Diameters (OD) from 4.0" to 15.0" in Thicknesses up to 3.0"	

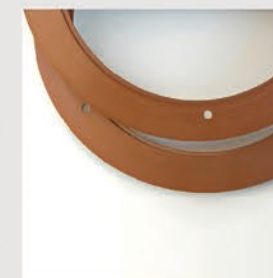
Size and shape capabilities of individual materials may vary. Contact Polymics, Ltd. for details. Custom materials/sizes also available.



POLYMICS' STANDARD POLYIMIDE (PI) SIZES / SHAPES

PLATES	12.0" x 6.0" in Thicknesses from 0.25" to 1.5"	
RODS	As Molded	Diameters from 2.0" to 4.0"
		Lengths from 0.25" to 3.0"
	Dowelled	Diameters up to 1.5"
TUBES		Lengths up to 12.0"
	Outer Diameters (OD) from 3.0" to 5.0" in Lengths of 3.0" with Wall Thicknesses up to 1.75"	
	Outer Diameters (OD) of 10.25" in Lengths of 0.5" to 1.1" with Wall Thicknesses up to 2.6"	
DISCS	Outer Diameter (OD) of 15.125" in Lengths from 0.5" to 1.0" with a Wall Thickness of 0.5"	
	Outer Diameters (OD) from 2.0" to 5.0" in Thicknesses up to 2.0"	

CCM and DF products available upon request.



SUMMARY

Polymics HCM process is a low volume, high temperature, high pressure process. We have also developed direct form and cold compression molding processes to cover other application.

A wide range of polymer shapes are offered for thermoplastics, thermosets, their compounds, blends, alloys, and composites.