

An engineering plastic replacing metals



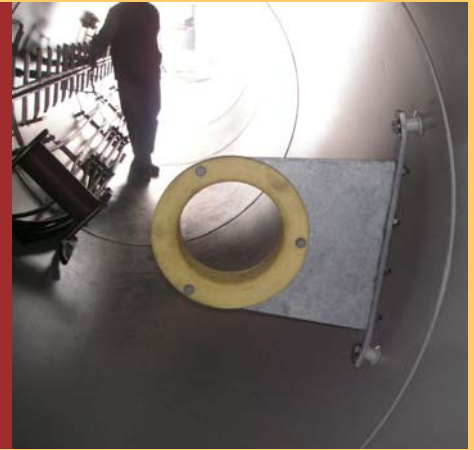
New technology, Advanced Properties

KESTAMID®

Cast Polyamide

Kestamid® is a registered trademark of Polikim A.S.

KESTAMID®

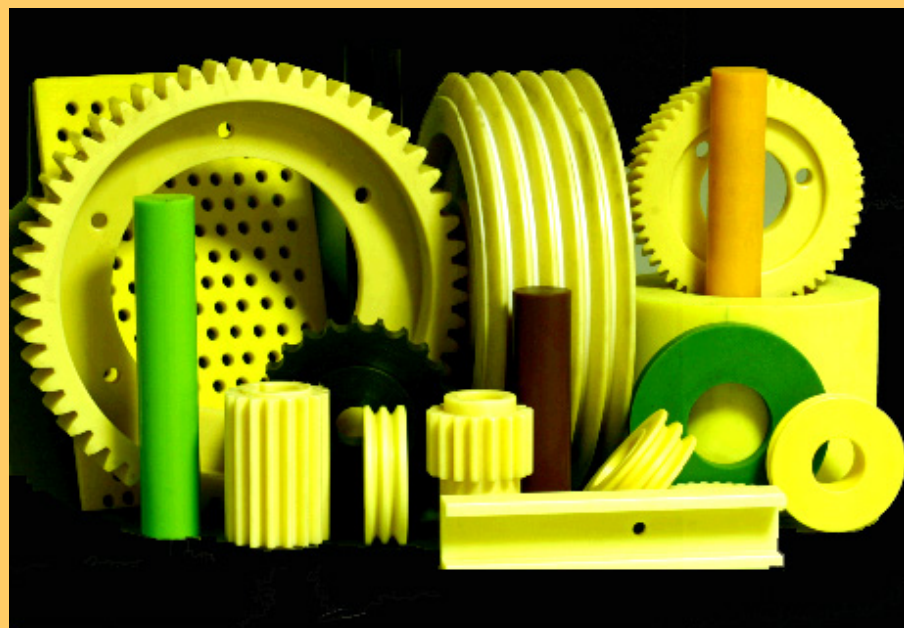


General Properties

Kestamid® is a registered trademark of Polikim.

KESTAMID® is a type of polyamide with outstanding properties due to its cross-linked molecular structure. Polyamide is one of the most commonly used engineering plastics with its excellent mechanical, physical and chemical properties. Due to its high molecular weight, crystallized structure and cross-links, **KESTAMID®** is a hard plastic that is resistant to wear and abrasion. Its water absorption is less compared to Nylon 6. Special types with additives are also produced to improve its mechanical and physical properties.

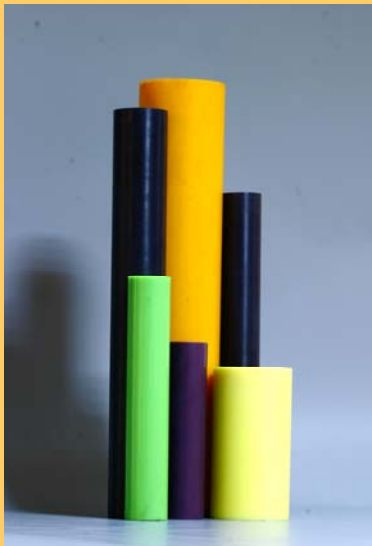
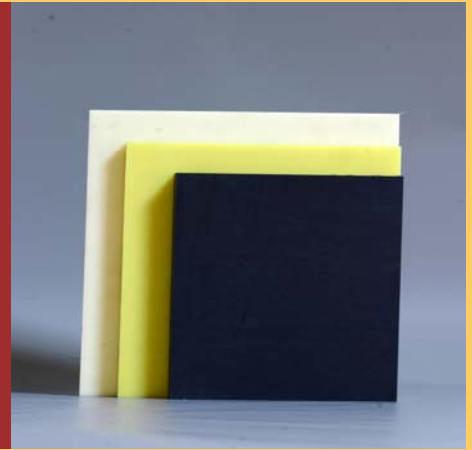
KESTAMID® is yellow colored. Upon request, it can be produced in black and other colors. **KESTAMID®** can easily be machined in universal metal and wood workshops. **KESTAMID®** has good chemical resistance.



KESTAMID®

Standard Types

Kestamid® is a registered trademark of Polikim.



KESTAMID® is also known as Cast Polyamide or Cast Nylon.

KESTAMID® is an engineering plastic that is used commonly in manufacturing due to its excellent mechanical, physical, chemical and electrical properties. It can easily replace aluminum, copper, bronze, steel, fiber, brass and other metals in a wide range of applications.



WHAT HAS BEEN IMPROVED with the NEW POLIKIM TECHNOLOGY?

- Impact resistance has been increased.
- Friction coefficient has been decreased.
- Internal tensions and stresses have been reduced.
- It has become easier to machine.
- Dimensions have been increased.
- Possibility of spectrum of colors

The new **KESTAMID®** meets the world standards.

Standard Dimensions:

MOULDED RODS

OD Ø15-Ø700mm, L 1000-500mm

MOULDED TUBES

OD Ø70- Ø625mm, ID Ø40- Ø300mm L 1000-500mm

MOULDED TUBES

OD Ø70-Ø200mm, L 1000mm, Wall Thickness: 10-50mm

SHEETS

T 10-130mm, WxL 500x500 - 500x1000 - 600x600 - 600x1200 -

1000x1000 - 1000x2000 - 1200x1850 - 1220x2000mm

KESTAMID®

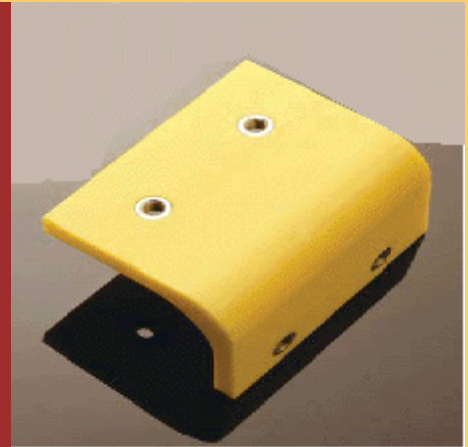
Compounds

Kestamid® is a registered trademarks of Polikim.



- **KESTOIL®**
(Oil-filled, for bearings)
- **KESTLUB®**
(Solid lubricant filled, for bearings)
- **KESTAMID-HS®**
(Heat stabilized)
- **KESTAMID-HSUV®**
(Heat & UV stabilized)
- **KESTAMID-NT®**
(For food & pharma)
- **KESTAMID-GRF®**
(Graphite-filled, resistant to pressure)

KESTAMID®



Technical Values

Kestamid® is a registered trademark of Polikim.

	Test Method ISO	Unit	KESTAMID®	KESTOIL®	KESTLUB®	KESTAMID HS®	KESTAMID GRF®
General Properties							
Color			Yellow	Green	Red	Blue	Dark Grey
Density	1183	gr/cm ³	1.15	1.14	1.15	1.15	1.15
Water Absorption (saturation in water of 23°C)	62	%	7	5	5	6	5
Mechanical Properties							
Tensile Strength at Break	527	Kg/cm ²	850	750	800	800	750
Tensile Modulus of Elasticity	527	Mpa	4000	4000	4000	4000	4100
Elongation at Break	527	%	>20	>30	>20	>20	>20
Compression Stress	604	Kg/cm ²	950	950	950	950	1050
Compression Modulus	604	MPa	2700	2500	2600	2700	3000
Impact Strength (Charpy, unnotched)	179	Kj/m ²	No break	No break	No break	No break	No break
Impact Strength (Izod, notched)	180	Kj/m ²	5.6	6	6	5.6	5
Coefficient of Friction, Dynamic			0.39	0.15	0.08	0.39	0.15
Hardness	868	Shore D	84	83	84	84	85
Wear resistance		mg/km	0.44	0.11	0.02	0.44	0.20
K Factor		mm ³ /Nm	5.0x10 ⁻⁶	1.2x10 ⁻⁶	0.25x10 ⁻⁶	5.0x10 ⁻⁶	1.2x10 ⁻⁶
Thermal Properties							
Melting Temperature		°C	220	220	220	220	220
Maximum Allowable Service Temperature in Air – Continuous		°C	110	110	110	125	115
Maximum Allowable Service Temperature in air – Short term		°C	170	170	170	185	175
Coefficient of Linear Thermal Expansion	11359	°C ⁻¹	8x10 ⁻⁵	8x10 ⁻⁵	8x10 ⁻⁵	8x10 ⁻⁵	8x10 ⁻⁵
Electrical Properties							
Dielectric Coefficient	60250		3.7	3.7	3.7	3.7	
Electric Strength	60243	kV/mm	25	25	25	25	
Volume Resistivity	60093	Ω.cm	>10 ¹⁴	>10 ¹⁴	>10 ¹⁴	>10 ¹⁴	
Surface Resistivity	60093	Ω	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	

KESTAMID®

Applications

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SPINDLE BEARINGS and GUIDES

In spindles, due to the nature of the process, high mechanical and temperature resistance are essential properties. These properties combined with no need for lubrication make **KESTAMID®** a great choice for spindle bearings, guides and supports.



RAILWAYS

With its high impact and wear resistance, low friction coefficient and superior mechanical properties, **KESTAMID®** components are used safely on railways and in trains around the world.



PULLEYS, SHEAVES

KESTAMID® is a peerless solution in conveying steel ropes and wires, in directing aluminum and metal profiles, in elevators, cableways and suspension railways where corrosion and noise are critical issues.



MACHINE COMPONENTS

KESTAMID® is used successfully in place of metals in many types of machines such as packaging, textile, metal working, leather, chemicals, construction etc. The fact that it is light, corrosion and wear resistant and has superior mechanical properties provides many advantages to the end user.

KESTAMID®



Applications

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GEARS

KESTAMID® is used in all types of gear wheels to convey mechanical motions. Its impact resistance, no need for lubrication and silent operation play a key role in this application. It is easy to machine in universal workshops. It enables silent operation without vibrations. **KESTAMID®** is lightweight and economical in straight, helical and infinite gear mechanisms.



BEARINGS, BUSHES

KESTAMID® bearings, bushes and guides are highly resistant to wear. They are lightweight. Thanks to their low friction coefficient, they don't require lubrication. They work silently. They function as shock absorbers in movements with impacts and vibrations. It is easy to assemble them and are low maintenance.

VARIOUS APPLICATION AREAS

Construction Machine Components
Roller, Cylinder Coatings
Rudder and Stern Tube Bearings
Gaskets
Feeding screws
Wear plates
Guide belts
Directing Profiles
Scrapers
Press plates
Sliding purloins
Hammer Heads
etc.

Pumps and Valve Coatings
Manifolds
Timing gears
Couplers
Wear supports
Elevator buckets
Steel cored pulleys, Gears and Bushes
Telescopic Cylinder Bearings
Drying Cylinder Gears
Water Purification Equipment Parts
Car Wheels
Prototype Machine Components
etc.

Leader in engineering plastics production since 1971

EFALON®

KESTAMID®

ULPOLEN®

WE FIND SOLUTIONS TO YOUR PROBLEMS

Efalon®, Kestamid®, Ulpolen® are registered trademarks of Polikim.

EFALON®, PTFE T-100



EFALON® is Polikim's PTFE material. It has superior properties that can't be found in combination in any other material. It is resistant to all chemicals used in manufacturing and can be used between -260°C and +270°C. Nothing sticks onto its surface and is more slippery than ice.

KESTAMID®, PA6G Standard



With its outstanding mechanical, physical and chemical properties, **KESTAMID®** is one of the most commonly used engineering plastics. **KESTAMID®** has good impact and wear resistance and fatigue strength. It is an engineering plastic replacing metals.

ULPOLEN®, UHMWPE 1000



ULPOLEN® is a type of polyethylene with very high molecular weight. Its density and water absorption are low. **ULPOLEN®** has very different properties than HDPE. It has utmost impact and wear resistance. Its coefficient of friction is low. Its chemical resistance and electrical properties are good.

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