



# Amilon™

## The Alternative to Rulon®

### It all starts with the right material

Because we control our own PTFE compounding, sintering, and machining, we are able to create PTFE shapes or components to your exact requirements, using graphite, bronze, glass, moly, or carbon fillers to improve:

- Thermal conductivity
- Coefficient of expansion
- Compressive strength
- Wear rate
- Creep and cold flow

Our engineering and product management team will assist you in selecting materials that possess the properties and characteristics you need to meet specific applications.

Amilon™ compounds offer the combination of high compressive strengths, low coefficient of friction, and excellent abrasion and corrosion resistance while running without lubrication. Material is available in molded rods and cylinders as well as skived or molded sheets.

### Color Guide

Amilon™	Rulon®	Color
3	641	White
10	W2	Black
22	123	Black
44	142	Blue
62	AR	Maroon
65	LR	Dark Maroon
77	F	Green
92	J	Gold

### Amilon™ 3

Alternative to Rulon® 641  
FDA compliant for food processing

### Amilon™ 10

Alternative to Rulon® W2  
For wet environments

### Amilon™ 22

Alternative to Rulon® 123  
Excellent thermal and static dissipative

### Amilon™ 44

Alternative to Rulon® 142  
For machine guide ways

### Amilon™ 62

Alternative to Rulon® AR  
High wear resistance and low friction

### Amilon™ 65

Alternative to Rulon® LR  
Abrasive and creep resistant

### Amilon™ 77

Alternative to Rulon® F  
Low coefficient of friction

### Amilon™ 92

Alternative to Rulon® J  
Good wear and abrasion resistance



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# Amilon™ 3

## The Alternative to Rulon® 641

Amilon™ 3 has been developed for use in food and drug applications and is FDA compliant. It has been designed to run dry without any additional lubrication. Amilon™ 3 is used in applications ranging in temperature from -400°F to +500°F. Material is available in molded rods and cylinders as well as skived or molded sheets.

Applications: Pumps, Compressors, Insulators

Color: White

Property	Units	ASTM Method	Typical Values
Specific Gravity	g/cc	ASTM D4745	2.29
Hardness (initial)	Shore D	ASTM D2240	67
Hardness (15 second)	Shore D	ASTM D2240	62
Tensile Strength	psi	ASTM D4745	3100
Elongation	%	ASTM D4745	235
Deformation Under Load (Permanent deformation after 24 hrs, 2175 psi)	%	Based on D-621	2.9
Coefficient Of Linear Thermal Expansion (75°F - 200°F molded direction) (75°F - 300°F molded direction)	in/in/°F	ASTM E831	5.4 x 10 <sup>-5</sup> 6.1 x 10 <sup>-5</sup>
Thermal Conductivity ( 2.09BTU in / hr ft²F)	W / mK	ASTM E1530	.32
Water Absorption	%	ASTM D570	0

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# Amilon™ 10

## The Alternative to Rulon® W2

Amilon™ 10 has low friction, excellent wear characteristics and good thermal dissipation. It is excellent for use in fresh water applications. Its properties are enhanced when wet. It is compatible with most metal substrates and soft mating surfaces. Amilon™ 10 is used in applications ranging in temperature from -400°F to +500°F. Material is available in molded rods and cylinders as well as skived or molded sheets.

Applications: Pumps, Mixers, Compressors  
Color: Black

Property	Units	ASTM Method	Typical Values
Specific Gravity	g/cc	ASTM D4745	2.10
Hardness (initial)	Shore D	ASTM D2240	66
Hardness (15 second)	Shore D	ASTM D2240	61
Tensile Strength	psi	ASTM D4745	2750
Elongation	%	ASTM D4745	200
Deformation Under Load (Permanent deformation after 24 hrs, 2175 psi)	%	Based on D-621	2.7
Coefficient Of Linear Thermal Expansion (75°F - 200°F molded direction) (75°F - 300°F molded direction)	in/in/°F	ASTM E831	4.6 x 10 <sup>-5</sup> 5.6 x 10 <sup>-5</sup>
Thermal Conductivity ( 2.09BTU in / hr ft <sup>2</sup> F)	W / mK	ASTM E1530	.46
Water Absorption	%	ASTM D570	0

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# Amilon™ 22

## The Alternative to Rulon® 123

Amilon™ 22 is the recommended material for use in wet or submerged applications. It is FDA compliant. This material is also great in applications where the mating surface is soft or non-ferrous. Amilon™ 22 is used in applications ranging in temperature from -400°F to +500°F. Amilon™ 22 is available in molded rods and cylinders as well as skived or molded sheets.

Applications: Pumps, Compressors, Liners  
Color: Black

Property	Units	ASTM Method	Typical Values
Specific Gravity	g/cc	ASTM D4745	2.14
Hardness (initial)	Shore D	ASTM D2240	66
Hardness (15 second)	Shore D	ASTM D2240	61
Tensile Strength	psi	ASTM D4745	3740
Elongation	%	ASTM D4745	250
Deformation Under Load (Permanent deformation after 24 hrs, 2175 psi)	%	Based on D-621	3
Coefficient Of Linear Thermal Expansion (75°F - 200°F molded direction) (75°F - 300°F molded direction)	in/in/°F	ASTM E831	6.1 x 10 <sup>-5</sup> 6.8 x 10 <sup>-5</sup>
Thermal Conductivity ( 2.09BTU in / hr ft <sup>2</sup> F)	W / mK	ASTM E1530	.39
Water Absorption	%	ASTM D570	0

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# Amilon™ 44

## The Alternative to Rulon® 142

Amilon™ 44 is an excellent choice of material for linear bearing applications such as slideways in heavy equipment and machine tools. It performs exceptionally well in applications under extremely heavy loads. Amilon™ 44 is used in applications ranging in temperature from -400°F to +500°F. Amilon™ 44 is available in molded rods and cylinders as well as skived or molded sheets.

Applications: Lathes, Compressors, Linear Slides  
Color: [Blue](#)

Property	Units	ASTM Method	Typical Values
Specific Gravity	g/cc	ASTM D4745	3.08
Hardness (initial)	Shore D	ASTM D2240	70
Hardness (15 second)	Shore D	ASTM D2240	65
Tensile Strength	psi	ASTM D4745	3210
Elongation	%	ASTM D4745	175
Deformation Under Load (Permanent deformation after 24 hrs, 2175 psi)	%	Based on D-621	2.6
Coefficient Of Linear Thermal Expansion (75°F - 200°F molded direction) (75°F - 300°F molded direction)	in/in/°F	ASTM E831	5.1 x 10 <sup>-5</sup> 5.9 x 10 <sup>-5</sup>
Thermal Conductivity ( 2.09BTU in / hr ft <sup>2</sup> F)	W / mK	ASTM E1530	.44
Water Absorption	%	ASTM D570	0

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# Amilon™ 62

## The Alternative to Rulon® AR

Amilon™ 62 is utilized in seals, piston cups, and some bearing applications. This material has high wear resistance, low friction, and good chemical and electrical insulating properties. Amilon™ 62 also offers a great combination of flexibility and load carrying properties. Fillers are ceramic in nature and mating surfaces should be RC 35 or harder. This material is used in applications at temperature extremes from -400°F to +500°F. Amilon™ 62 is available in molded rods and cylinders as well as skived or molded sheets.

Applications: Pumps, Compressors, Insulators  
 Color: **Light Maroon**

Property	Units	ASTM Method	Typical Values
Specific Gravity	g/cc	ASTM D4745	2.27
Hardness (initial)	Shore D	ASTM D2240	62
Hardness (15 second)	Shore D	ASTM D2240	57
Tensile Strength	psi	ASTM D4745	2550
Elongation	%	ASTM D4745	225
Deformation Under Load (Permanent deformation after 24 hrs, 2175 psi)	%	Based on D-621	3
Coefficient Of Linear Thermal Expansion (75°F - 200°F molded direction) (75°F - 300°F molded direction)	in/in/°F	ASTM E831	4.9 x 10 <sup>-5</sup> 5.7 x 10 <sup>-5</sup>
Thermal Conductivity ( 2.09BTU in / hr ft <sup>2</sup> F)	W / mK	ASTM E1530	.3
Water Absorption	%	ASTM D570	0

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# Amilon™ 65

## The Alternative to Rulon® LR

Amilon™ 65 offers the user high wear resistance, low friction, good electrical properties and chemical inertness. This material is the most widely used and provides superior functionality as a sleeve, flange or thrust bearing. Amilon™ 65 can be bonded to nearly any surface to provide wear resistance and reduced friction. This material is used in applications at temperature extremes from -400°F to +500°F. Amilon™ 65 is available in molded rods and cylinders as well as skived or molded sheets.

Applications: Pumps, Compressors, Insulators  
 Color: **Dark Maroon**

Property	Units	ASTM Method	Typical Values
Specific Gravity	g/cc	ASTM D4745	2.27
Hardness (initial)	Shore D	ASTM D2240	62
Hardness (15 second)	Shore D	ASTM D2240	57
Tensile Strength	psi	ASTM D4745	2550
Elongation	%	ASTM D4745	225
Deformation Under Load (Permanent deformation after 24 hrs, 2175 psi)	%	Based on D-621	3
Coefficient Of Linear Thermal Expansion (75°F - 200°F molded direction) (75°F - 300°F molded direction)	in/in/°F	ASTM E831	4.9 x 10 <sup>-5</sup> 5.7 x 10 <sup>-5</sup>
Thermal Conductivity ( 2.09BTU in / hr ft²F)	W / mK	ASTM E1530	.3
Water Absorption	%	ASTM D570	0

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# Amilon™ 77

## The Alternative to Rulon® F

Amilon™ 77 affords the user the lowest coefficient of friction. It works well in applications against soft mating surfaces like aluminum, mild steel, or bronze. Amilon™ 77 does not gall surfaces on mating parts. It is used in applications ranging in temperature from -400°F to +500°F. Amilon™ 77 is available in molded rods and cylinders as well as skived or molded sheets.

Applications: Compressors, Automotive, Insulators

Color: Green

Property	Units	ASTM Method	Typical Values
Specific Gravity	g/cc	ASTM D4745	1.85
Hardness (initial)	Shore D	ASTM D2240	67
Hardness (15 second)	Shore D	ASTM D2240	62
Tensile Strength	psi	ASTM D4745	2520
Elongation	%	ASTM D4745	165
Deformation Under Load (Permanent deformation after 24 hrs, 2175 psi)	%	Based on D-621	2.9
Coefficient Of Linear Thermal Expansion (75°F - 200°F molded direction) (75°F - 300°F molded direction)	in/in/°F	ASTM E831	5.0 x 10 <sup>-5</sup> 5.8 x 10 <sup>-5</sup>
Thermal Conductivity ( 2.09BTU in / hr ft²F)	W / mK	ASTM E1530	.21
Water Absorption	%	ASTM D570	0

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# Amilon™ 92

## The Alternative to Rulon® J

Amilon™ 92 offers low coefficient of friction, good wear and abrasion resistance for both seal and bearing applications. This material can be run on non-metallic and non-ferrous mating surfaces due to its all plastic nature. Amilon™ 92 is the best grade for aluminum or other soft mating surfaces. This material is used in applications at temperature extremes from -400°F to 500°F. Amilon™ 92 is available in molded rods and cylinders as well as skived or molded sheets.

Applications: Air Compressors, Automotive, Insulators  
 Color: Gold

Property	Units	ASTM Method	Typical Values
Specific Gravity	g/cc	ASTM D4745	1.92
Hardness (initial)	Shore D	ASTM D2240	64
Hardness (15 second)	Shore D	ASTM D2240	60
Tensile Strength	psi	ASTM D4745	2510
Elongation	%	ASTM D4745	235
Deformation Under Load (Permanent deformation after 24 hrs, 2175 psi)	%	Based on D-621	3
Coefficient Of Linear Thermal Expansion (75°F - 200°F molded direction) (75°F - 300°F molded direction)	in/in/°F	ASTM E831	5.4 x 10 <sup>-5</sup> 6.3 x 10 <sup>-5</sup>
Thermal Conductivity ( 2.09BTU in / hr ft²F)	W / mK	ASTM E1530	.21
Water Absorption	%	ASTM D570	0

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