PACTUMAX
INTERNATIONAL PTE LTD

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Welcome to our new issue of Pactumax Monthly Advanced Product Alert for the Year 2026 – keeping you informed of new product and materials advancements.

We will like to also introduce to you our latest wide range of products available from Carr Lane & Reid Supply, etc.

Click on the hyperlink below to *access* our e-catalogs from our website to view more:

https://pactumax.com/technical-resources/

This month's featured items are **PEEK® CNT and SEMITRON® MDS 100**

PEEK® CNT is an engineering plastic that has a homogenous surface & volume resistivity.

SEMITRON® MDS 100 is the modified PEEK with incredible combination of strength, stiffness and stability.

Remember, Pactumax is *GROWING* – we are now your One-Stop Source for *all* your materials and products' needs!

ADVANCED PRODUCT ALERT OF THE MONTH

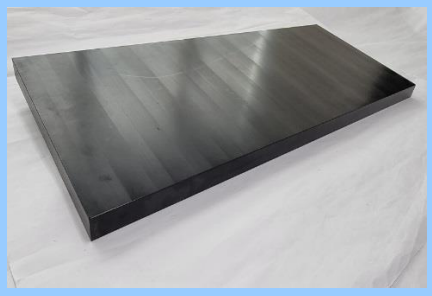
PEEK® CNT

Manufactured by DYNEX

PRODUCT OVERVIEW

PEEK® CNT is an engineering plastic that has a homogenous surface & volume resistivity. It is dimensionally able to control its respective resistivities. Applications include socket nests, contactors for test equipment, etc.

PEEK® CNT



PRODUCT COLORS

- Black

ADVANTAGES

- Homogenous Surface & Volume Resistivity
- Low-out gassing
- Dimensionally stable
- Ability to control respective resistivities

APPLICATIONS

- Sockets
- Nests
- Contactors for Test Equipment
- Electronic Device Handling Components

TYPICAL PROPERTIES OF PEEK® CNT

General Properties	ASTM or UL TEST	PEEK® CNT Typical Values
PHYSICAL		
Density (g/cm^3)	1183	1.31
Water Absorption, 24 hours (mg)	62	-
MECHANICAL		
Tensile Strength (MPa)	527	115
Tensile Strength at Break (%)	527	20
Modulus of Elasticity (MPa)	527	4,300
Compressive Stress (MPa)	604	-
Rockwell Hardness	2039-2	R120
IZOD Notched Impact (J/m)	180 / 2A	41
THERMAL		
Coefficient of Thermal Expansion 23 °C to 100 °C (10^{-6}/k)	-	-
Heat Deflection Temp (°F/ °C) at 1.8 MPa	75	320/160
Melting Temperature (°F/ °C)	-	649/343
Max Continuous Service Temp (°F/ °C)	-	482/250
Flammability Rating (UL94)	-	V-0
Thermal Conductivity at 23 °C (W/m.k)	-	-
ELECTRICAL		
Electric Strength (V/mil)	60243	-
Surface Resistivity (ohm)	60293	$10^5 – 10^9$
Volume Resistivity (ohm.cm)	60293	$10^6 – 10^{10}$

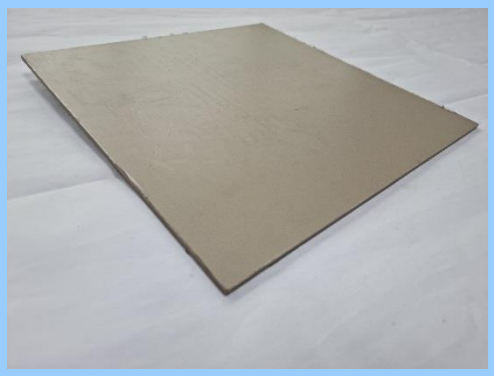
SEMITRON® MDS 100

Manufactured by MITSUBISHI CHEMICAL ADVANCED MATERIALS

PRODUCT OVERVIEW

SEMITRON® MDS 100 is the modified PEEK with incredible combination of strength, stiffness and stability**.** This material is made to be used in uncontrolled application environmental conditions where high levels of precision are required. Applications for **SEMITRON® MDS 100** include fixtures, nests, sockets in test and package equipment throughout the semiconductor and electronics industry.

SEMITRON® MDS 100



PRODUCT COLORS

- Grey

ADVANTAGES

- Very Low Moisture Absorption
- Excellent Dimensional Stability
- Good Impact Strength, Stiffness and Minimum Levels of Creep.
- Excellent Machinability for Tighter Pitch and Fine Diameter Holes
- Low CLTE means parts stay in specification

APPLICATIONS

- Test Sockets for the Semiconductor Manufacturing Industry
- Fixtures for Electronics Testing
- Mounting Points for Precision Diagnostic Equipment
- Positioning Platforms for Miniature Motion Control Devices

TYPICAL PROPERTIES OF SEMITRON® MDS 100

General Properties	ASTM or UL Test	SEMITRON® MDS 100 Typical Values
PHYSICAL		
Specific Gravity (g/cm^3)	D792	1.51
Water Absorption, 24 hrs (%)	D570	0.10
MECHANICAL		
Tensile Strength (psi)	D638	14,700
Tensile Modulus (psi)	D638	1,500,000
Tensile Elongation at Break (%)	D638	1.5
Flexural Strength (psi)	D790	20,500
Flexural Modulus (psi)	D790	1,420,000
Compressive Strength (psi)	D695	24,400
IZOD Notched Impact (ft-lb/in)	D256	-
Rockwell R Hardness	2240	121
THERMAL		
Coeff. of Thermal Expansion (µin./in./°F)	E-831	1.1
Heat Deflection Temperature (°F/ °C) @ 264 psi	D648	410/210
Melting Temperature (°F/ °C)	D3418	635/335
Glass Transition Temperature (°F/ °C)	-	-
Thermal Conductivity at 23°C (BTU-in/ft^2-hr-°F)	-	1.73
Flammability Rating	UL94	V-0
ELECTRICAL		
Electric Strength (V/mil)	D149	-
Dielectric Constant at 1 MHz	D150	3.37
Dissipation Factor at 1 MHz	D150	0.007
Surface Resistivity (ohm)	ANSI/ESD STM 11.11	10^{13}

SCREW JACKS

Manufactured by Carr Lane Manufacturing Co.

Carr Lane Manufacturing is well known in the industry for its industrial parts and standard tooling components. It is specially known for jig & fixture tooling components. Carr Lane Manufacturing has a huge variety of products ranging up to 100,000 industrial parts, components, tools & accessories, toggle clamps, handles, knobs, etc.

Screw jacks are versatile tools used for precise height adjustment and support, ideal for stabilizing and aligning workpieces in a range of industrial applications.

Below contains the Product Range for Screw Jacks:

1) Knurled Screw Jacks

Small screw jack with a knurled head for convenient finger adjustment. Knurled Check Nut can be ordered separately below if required. Range of the thread sizes from 5/16-18 to 5/8-11, most in several lengths. Manufactured in USA.

4) Heavy-Duty Screw Jacks

Heavy-duty adjustable support that accommodates any of the three different tips. There are three choices of support heights.

5) Through-Hole Leveling Jacks

Through-Hole Leveling Jacks are designed and made for precise leveling at a desired clamping point. Clamping is done by tightening a bolt inserted through the workpiece and through the inside diameter of the leveling jack, after the desired level is adjusted and set.

2) Torque Screw Jacks

Screw jack with a spring-loaded clutch mechanism. It has a knurled head which disengages when the indicated end force is reached. It is designed to prevent exerting excessive force on thin wall and other delicate work pieces. In addition, it is furnished with Knurled Check Nut. Range of the thread sizes from 1/4-20 to 5/8-11. Manufactured in USA.

3) Adjustable Locating Buttons

Support screw with fine threads for precise adjustment. Range of the fine-thread sizes from #10-32 to 3/4-16, plus 1/4-20 (M5 to M16 coarse threads in metric). Manufactured in USA.

Ball Bearings, Flanged, Inch

Manufactured by Nordex INCORPORATED

Nordex, incorporated in 1960, designed and manufactured surface mount technology assembly equipment. In 1975, the product line was modified for the manufacture of miniature precision electro-mechanical parts and assemblies. Today, our focus is on fully integrated turnkey subsystems for the medical, laboratory and industrial analytical instruments, factory automation, power transmission, robotics, defense, aerospace and semi-conductor OEM industries.

Ball Bearings, Flanged, Inch

Flanged ball bearings are designed to have an extended lip on outer ring designed to prevent axial shifting and handle thrust loads. In addition, it is use to secure housings, maintain precision alignment & reduce friction.

Applications include conveyor systems, robotics & medical devices to simplify housing designs

Below contains the Product Range for Ball, Flanged, Inch

1) **Precision Ball Bearing, Inch, Abec 1, flanged, shielded**

Material: 400 Series Stainless Steel
Radius: 0.003 to 0.016 inch
Outside Diameter: 0.1562 to 1.1250 inch
Inside Diameter: 0.0469 to 0.500 inch
Width: 0.0937 to 0.3125 inch
Flange Width: 0.031 to 0.062 inch
Flange Diameter: 0.203 to 1.225 inch

4) **Precision Ball Bearings, Inch, Abec 3, flanged, no shield**

Material: 400 Series Stainless Steel
Radius: 0.003 to 0.016 inch
Outside Diameter: 0.1250 to 1.1250 inch
Inside Diameter: 0.0400 to 0.5000 inch
Width: 0.0469 to 0.3125 inch
Flange Width: 0.013 to 0.062 inch
Flange Diameter: 0.171 to 1.225 inch

2) **Precision Ball Bearings, Inch, Abec 1, flanged, no shield**

Material: 400 Series Stainless Steel
Radius: 0.003 to 0.016 inch
Outside Diameter: 0.1250 to 1.1250 inch
Inside Diameter: 0.0400 to 0.500 inch
Width: 0.0469 to 0.3125 inch
Flange Width: 0.013 to 0.062 inch
Flange Diameter: 0.171 to 1.225 inch

3) **Precision Ball Bearings, Inch, Abec 3, flanged, shielded**

Material: 400 Series Stainless Steel
Radius: 0.003 to 0.016 inch
Outside Diameter: 0.1562 to 1.1250 inch
Inside Diameter: 0.0469 to 0.5000 inch
Width: 0.0937 to 0.3125 inch
Flange Width: 0.031 to 0.062 inch
Flange Diameter: 0.203 to 1.225 inch

5) **Precision Ball Bearings, Inch, Abec 7, flanged, shielded**

Material: 400 Series Stainless Steel
Radius: 0.003 to 0.062 inch
Outside Diameter: 0.1562 to 1.1250 inch
Inside Diameter: 0.0469 to 0.5000 inch
Width: 0.0937 to 0.3125 inch
Flange Width: 0.031 to 0.062 inch
Flange Diameter: 0.203 to 1.225 inch

Precision Ball Bearings, Inch, Abec 7, flanged, no shield

Material: 400 Series Stainless Steel
Radius: 0.1562 to 1.1250 inch
Outside Diameter: 0.003 to 0.016 inch
Inside Diameter: 0.0469 to 0.5000 inch
Width: 0.0625 to 0.3125 inch
Flange Width: 0.013 to 0.062 inch
Flange Diameter: 0.203 to 1.225 inch

For more information on our products and availability, please do not hesitate to contact our nearest Pactumax International office, or e-mail us at sales@pactumax.com. We look forward to hearing from you!

Highlights from the next issue of Pactumax Monthly Advanced Product Alert – TECHTRON® PPS , SEMITRON® 500, Washers (Carr Lane), Self-Locking Thread Inserts (Reid Supply), Stay tuned!