



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 **SEMITRON® 520HR** and **CERAMIC-FILLED PEEK®**

SEMITRON® 520HR is an engineering plastic with electro static dissipative properties with an ability to resist dielectric breakdown at high voltages.

CERAMIC-FILLED PEEK® has an excellent balance of properties including outstanding dimensional stability, ductility, low moisture absorption, high purity, and strength.

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

ADVANCED PRODUCT ALERT OF THE MONTH

SEMITRON® 520HR

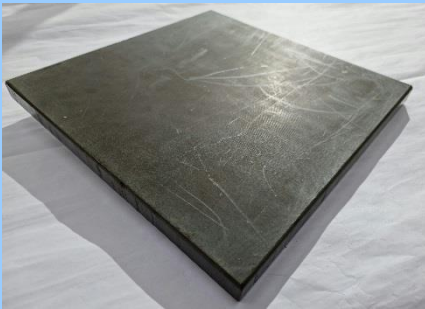
Manufactured by



PRODUCT OVERVIEW

SEMITRON® 520HR is an engineering plastic with electro static dissipative properties with an ability to resist dielectric breakdown at high voltages. **SEMITRON® 520HR** is the only Semitron® grade that is able to maintain the performance in voltage range of 100V to 1000V whilst possessing the mechanical performance needed to cater to applications that are demanding. Other characteristics include high heat resistance and strength which will be ideal for applications such as test equipment, semiconductor and electronics industry.

SEMITRON® 520HR



PRODUCT COLORS

- Khaki Grey

ADVANTAGES

- Surface Resistivity in the range of 10^{10} to 10^{12} ohm/sq
- High Stiffness / Strength
- Dimensional Strength
- Thermally stable to temperature of 520 °F/ 280 °C

APPLICATIONS

- Nets
- Sockets
- Contractors
- Semiconductor/ Electronic Components
- Handling Components

TYPICAL PROPERTIES OF SEMITRON® 520HR

General Properties	ASTM or UL TEST	SEMITRON® 520HR Typical Values
PHYSICAL		
Specific Gravity (g/cm ³)	D792	1.58
Water Absorption, 24 hours (%)	D570	0.60
MECHANICAL		
Tensile Strength (psi)	D638	10,000
Tensile Modulus (psi)	D638	800,000
Tensile Elongation at Yield (%)	D638	-
Flexural Strength (psi)	D790	17,000
Flexural Modulus (psi)	D790	800,000
Compressive Strength (psi)	D695	29,000
Hardness, Rockwell	D785	M108
IZOD Notched Impact (ft-lb/in)	D256	0.80
THERMAL		
Coefficient of Thermal Expansion (µin./in./°F)	E831 (TMA)	28
Heat Deflection Temp (°F/ °C) @ 264 psi	D648	520/271
Continuous Allowable Service Temp in Air (°F/ °C)	-	500/260
Thermal Conductivity (BTU-in / ft ² -hr-°F)	-	2.48
Flammability Rating	UL-94	V-0
ELECTRICAL		
Electric Strength (V/mil)	D149	475
Surface Resistivity (ohm)	ANSI/ ESD STM 11.11	10 ¹⁰ – 10 ¹²
Volume Resistivity (ohm.cm)	D257	-

CERAMIC-FILLED PEEK®

Manufactured by



PRODUCT OVERVIEW

CERAMIC-FILLED PEEK® has an excellent balance of properties including outstanding dimensional stability, ductility, low moisture absorption, high purity, and strength. It is ideal for tight tolerance, intricate machined components, is resistant to heat and aggressive chemicals. Applications include microprocessor test socket applications, semi-conductor, etc.

CERAMIC-FILLED PEEK®



PRODUCT COLORS

- White
- Grey

ADVANTAGES

- PEEK with Ceramic Fillers to significantly improve its mechanical properties.
- Excellent Dimensional Stability
- Good Impact Strength, Stiffness and Minimum Levels of Creep
- Better Impact Resistance and Toughness compared with Ceramics
- Excellent Machinability for Tighter Pitch and Fine Diameter Holes

APPLICATIONS

- Test Sockets
- Switches
- Connectors

TYPICAL PROPERTIES OF CERAMIC-FILLED PEEK®

General Properties	ASTM or UL TEST	CERAMIC-FILLED PEEK® Typical Values
PHYSICAL		
Specific Gravity (g/cm ³)	D792	1.51
Water Absorption, 24 hrs (%)	D570	0.37
MECHANICAL		
Tensile Strength (psi)	D638	15,500
Tensile Elongation at Break (%)	D638	21
Flexural Strength (psi)	D790	26,500
Flexural Modulus (psi)	D790	750,000
IZOD Notched Impact (ft-lb/in)	D256	1.0
IZOD Un-Notched Impact (ft-lb/in)	D256	No Break
THERMAL		
Coefficient of Thermal Expansion (10 ⁻⁵ / °F)	D696	2.0
Heat Deflection Temp Under Load (°F/°C)	D648	599 / 315
Melting Point (°F / °C)	D3418	649 / 343
Tg Glass Transition Temp (°F / °C)	D3418	289 / 143
Thermal Conductivity (BTU-in / ft ² -hr- °F)	C177	2.40
Flammability Rating	UL94	-
ELECTRICAL		
Dielectric Strength (VPM)	D149	400
Dielectric Constant (MHz)	D150	1, Dry 3.5
Dissipation Factor (MHz)	D150	1, Dry <0.005
Surface Resistivity (ohm sq)	EOS S11.11	10 ¹⁴
Volume Resistivity (ohm sq)	EOS S11.11	10 ¹⁴

L, T and Jig Pins

Manufactured by



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.

L, T and Jig Pins

L Pins, T Pins and Jig Pins are designed to do a precision ground for accurately aligning holes. L and T Pins are removable locating pins with a sturdy assembly which is designed to have a handle end with a small hole for attaching optional cable. Like L pins, T Pins, Jig Pins are designed to have an additional integral shoulder that is made to keep the handle raised

Below contains the Product Range for L, T and Jig Pins:



1) L Pins

L Pins are removable locating pins, precision ground for accurately aligning holes. It is to design to allow body inset into a solid handle and silver soldered to produce a sturdy assembly. **L Pins** is designed to have a small hole that is used to attach a cable which is optional. Available in diameters from 1/8 to 3/4" and other several number and letter sizes (4 to 20mm in metric), most in a choice of selected pin lengths



4) Locking L Pin

Similar to the L Pin, **Locking L Pin** is designed to be made with a locking bushing. When it is in a fully retracting position, the bushing's spring clip snaps into the pin's radial groove. This holds the pin fully retracted by spring force and positively prevents removal. In addition, Spring pressure also holds the pin in intermediate extended positions to allow the fixture is turned upside down. Available in pin diameters from 3/16 to 1/2" (6 to 12mm in metric), most in a choice of several pin lengths. Manufactured in USA.



2) T Pins

T Pins are removable locating pins, precision ground for accurately aligning holes. It is designed to allow body inset into a solid handle and silver soldered to produce a sturdy assembly. **T Pins** is designed to have a small hole that is used to attach a cable which is optional. Available in diameters from 1/8 to 3/4" and other several number and letter sizes (4 to 20mm in metric), most in a choice of selected pin lengths



3) Jig Pins

Jig Pins are removable locating pins, precision ground for accurately aligning holes. It is designed similar to L or T Pin but this pin has an additional integral shoulder that is made to keep the handle raised with a pin diameter ground 0.0003" under nominal size. To convert from a T handle to a L handle, use a hammer to tap to slide the roll-pin handle. Available in pin diameters from 3/16 to 1/2" (5 to 12mm in metric). Manufactured in USA.



5) Locking T Pins

Similar to the T Pin, **Locking T Pin** is designed to be made with a locking bushing. When it is in a fully retracting position, the bushing's spring clip snaps into the pin's radial groove. This holds the pin fully retracted by spring force and positively prevents removal. In addition, Spring pressure also holds the pin in intermediate extended positions to allow the fixture is turned upside down. Available in pin diameters from 3/16 to 1/2" (6 to 12mm in metric), most in a choice of several pin lengths. Manufactured in USA.



6) Captive Jig Pins

Similar to the Jig Pin, **Captive Jig Pins** is designed to be made with a locking bushing. When it is in a fully retracting position, the bushing's spring clip snaps into the pin's groove. This holds the pin fully retracted by spring force and positively prevents removal. In addition, Spring pressure also holds the pin in intermediate extended positions to allow the fixture is turned upside down. Furthermore, Captive Jig Pins has an integral shoulder to allow the handle to be raised. Available in pin diameters from 3/16 to 1/2" (6 to 12mm in metric), most in a choice of several pin lengths. Manufactured in USA.

Levelling Devices

Manufactured by

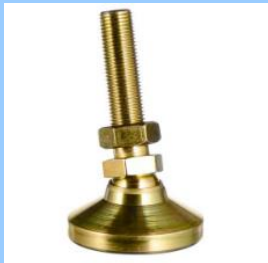


Vlier Products' history of success can be tied to the precision engineering of each of the over 3,300 standard parts offered in our extensive catalog. In addition to meeting demands on time and on budget, Vlier holds ISO:9001 and AS9100 certifications, internationally recognized Quality Management Systems that hold the company to first-rate quality standards and give assurance to customers of this quality.

Levelling Devices

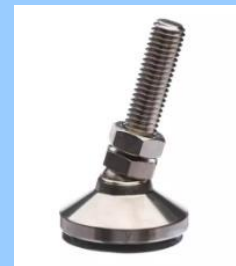
Designed to adjust to uneven conditions for greater stability, while protecting floors and other surfaces and other surfaces such as scrapes. The bases swivel 15° off centreline to adjust to uneven surfaces.

Below contains the Product Range for Levelling Devices



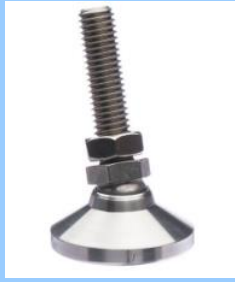
1) Original Series Stud Style Steel

Original Series Stud Style Steel provide an integrally machined stud as part of the ball. Their bases swivel 15° off the centreline to adjust to uneven surfaces. Applications include Data Storage & Large Medical Equipment. The standard design is zinc plate with gold chromate finish.



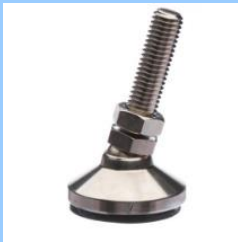
4) Original Series Stud Style with Elastomer Pad Stainless Steel

Original Series Stud Style with Elastomer Pad Stainless Steel is made with a 0.125" neoprene elastomer pad that's bonded to the bottom of the base to provide non-skid support. Stainless Steel prevents rust and corrosion. Applications include Material Handling Equipment & Industrial workstations.



2) Original Series Stud Style Stainless Steel

Original Series Stud Style Stainless Steel protects against rust and corrosion. It provides an integrally machined stud as part of the ball. Their bases swivel 15° off the centreline to adjust to uneven surfaces. Applications include Material Handling Equipment & Industrial workstations.



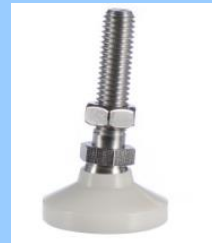
3) Original Series Stud Style with Elastomer Pad Steel

Original Series Stud Style with Elastomer Pad Steel is made with a 0.125" neoprene elastomer pad that's bonded to the bottom of the base to provide non-skid support. Applications include Data Storage & Large Medical Equipment. The standard design is zinc plate with gold chromate finish



5) Original Series Stud Style with Delrin® Base Steel

Original Series Stud Style with Delrin® Base Steel is designed to incorporate plastic Delrin® base that protects floors and surface finishes, and resists repeated impacts, moisture and temperatures up to 190°. Applications include Data Storage & Large Medical Equipment.



6) Original Series Stud Style with Delrin® Base Stainless Steel

Original Series Stud Style with Delrin® Base Stainless Steel designed to incorporate plastic Delrin® base that protects floors and surface finishes, and resists repeated impacts, moisture and temperatures up to 190°. Stainless Steel prevents rust and corrosion. Applications include Material Handling Equipment & Industrial workstations.

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 – SEMITRON® MDS 100, PEEK® CNT, Screw Jacks (Carr Lane), Ball, Flanged, Inch (Nordex), Stay tuned!