



PACTUMAX

INTERNATIONAL PTE LTD

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Welcome to our new issue of Pactumax Monthly Advanced Product Alert for the Year 2023 – keeping you informed of new product and materials advancements.

This month's featured items are **SEMITRON® MDS 100** and **NYLATRON® (MC901/GSM/NSM/GS)**.

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

NYLATRON® (MC901/GSM/NSM/GS) has extremely good wear resistance, couple with high tensile strength and modulus of elasticity.

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® MDS 100

Manufactured by



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

- Beige

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	D792	1.51
Water Absorption, 24 hrs (%)	D570	0.10
MECHANICAL		
Tensile Strength (psi)	D638	14,700
Tensile Modulus of Elasticity (psi)	D638	1,500,000
Tensile Elongation at Break (%)	D638	1.5
Flexural Strength (psi)	D790	20,500
Flexural Modulus of Elasticity (psi)	D790	1,420,000
Compressive Strength (psi)	D695	24,400
IZOD Notched Impact (ft-lb/in)	D256	0.40
Rockwell R Hardness	2240	121
THERMAL		
Coeff. of Thermal Expansion (x 10 ⁻⁵ in./in./°F)	E-831	1.1
Heat Deflection Temperature (°F/ °C) @ 264 psi	D648	410/210
Melting Temperature (°F/ °C)	D3418	635/340
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	0.01
Surface Resistivity (Ohm/sq)	ANSI/ESD STM 11.11	10 ¹³

NYLATRON® (MC901/GSM/NSM/GS)

Manufactured by

PRODUCT OVERVIEW

NYLATRON® (MC901/GSM/NSM/GS) has extremely good wear resistance, couple with high tensile strength and modulus of elasticity. In addition, it possesses high impact resistance, a high heat distortion temperature, and resist wear, abrasion and vibration. Lastly, NYLATRON® (MC901/GSM/NSM/GS) can withstand sustained contact with a wide variety of chemical, alkalies, dilute acids or oxidizing agents.

NYLATRON® (MC901/GSM/NSM/GS)



ADVANTAGES

- High Mechanical Strength, Stiffness, Hardness and Toughness
- Good Fatigue Resistance
- High Mechanical Damping Ability
- Good Sliding Properties
- Excellent Wear Resistance
- Good Electrical Insulating Properties
- High Resistance against High Energy Radiation (Gamma & X-rays)
- Good Machinability

PRODUCT COLORS

- Blue
- Grey-Black
- Grey
- Grey-Black

APPLICATIONS INCLUDE

- Sleeve & Slide Bearings
- Cutting & Chopping Boards
- Support & Guide Wheels
- Pulleys & Pulley-Linings
- Gear Wheels
- Seal-Rings

TYPICAL PROPERTIES OF NYLATRON® (MC901/GSM/NSM/GS)

General Properties	ASTM or UL TEST	NYLATRON® MC901 Typical Values	NYLATRON® GSM Typical Values	NYLATRON® NSM Typical Values	NYLATRON® GS Typical Values
PHYSICAL		Blue	Grey-Black	Grey	Grey-Black
Specific Gravity (g/cm ³)	D792	1.15	1.16	1.15	1.16
Water Absorption, 24 hrs (%)	D570	0.6	0.6	0.3	0.3
MECHANICAL					
Tensile Strength (psi)	D638	12,000	11,000	11,000	12,500
Tensile Strain at Break (%)	D638	20	30	20	25
Tensile Modulus of Elasticity (psi)	D638	400,000	400,000	410,000	480,000
IZOD Impact Strength, Notched (ft-lb/in)	D256	0.4	0.5	0.5	0.5
Rockwell Hardness	D785	M85	M84	M81	M88
THERMAL					
Coeff. of Thermal Expansion (in./in./°F)	E831	5 x 10 ⁻⁵	5 x 10 ⁻⁵	5.5 x 10 ⁻⁵	4 x 10 ⁻⁵
Heat Deflection Temp (°F/ °C) @ 1.8 MPa	D648	200/93	200/93	200/93	200/93
Thermal Conductivity at 23 °C (BTU IN./Chr/ft ² °FJ)	-	2.37	-	-	1.70
Flammability Rating @ (3mm thickness)	UL-94	HB	HB	HB	HB
ELECTRICAL					
Surface Resistivity (ohm/sq)	ANSI/ESD STM 11.11	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³
Volume Resistivity (ohm-cm)	60093	>10 ¹⁴	>10 ¹⁴	>10 ¹⁴	>10 ¹⁴
Dielectric Dissipation Factor Tan δ: at 1MHz	D150	3.7	3.7	-	-
Electric Strength (V/mil)	D149	500	400	400	350

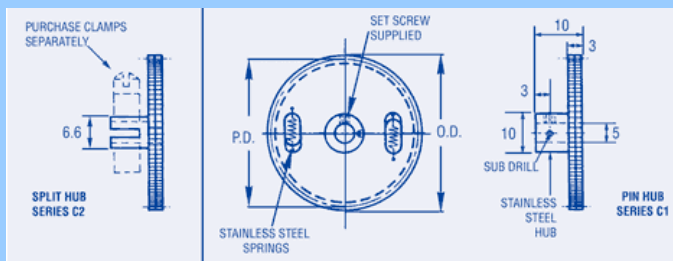
ANTI-BACKLASH GEAR - COMPACT DESIGN 0,4 MODULE, 5MM BORE #LFA-C1-75

Manufactured by



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.

ANTI-BACKLASH GEAR - COMPACT DESIGN 0,4 MODULE, 5MM BORE #LFA-C1-75



ANTI-BACKLASH GEAR - COMPACT DESIGN 0,4 MODULE, 5MM BORE #LFA-C1-75

- 20 Degree Pressure Angle. DIN 7 gears supplied
- When ordering Din 6 gears - add Din 6 to the catalog number
- Anodize may be grey or black at Nordex option

ANTI-BACKLASH GEAR - COMPACT DESIGN 0,4 MODULE, 5MM BORE #LFA-C1-75

Teeth: 75

Pitch Diameter: 30,00

Outside Diameter: 30,8

Material: 2024-T4 Aluminum

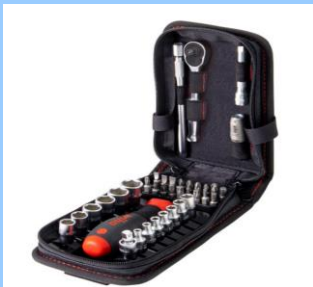
NUT DRIVER AND BIT SET 1/4"

Manufactured by



Wiha seeks to make daily life much easier for users with a product assortment of innovative hand tool solutions geared towards user needs. This is why Wiha develops, designs and manufactures products that meet the strictest requirements for quality, functionality, durability and ergonomic design. As a trusted, strategic partner of specialist retailers, Wiha offers a wide range of quality products for the professional segment.

NUT DRIVER AND BIT SET 1/4"



NUT DRIVER AND BIT SET 1/4" is a 40-piece nut driver and 1/4" bit set that is used to carry out fastenings in a single step. The set consists of 1/4" hex nut driver inserts size 4-14mm, bit holder ratchet wrench, two extensions, a universal joint, 1/4" nut driver adapter, various bits and a bit holder. This is to provide all the tools necessary for the user to perform installation and assembly work.

NUT DRIVER AND BIT SET 1/4" has an ergonomically-designed SoftFinish® screwdriver with magnetic bit holder that provides the user with comfortable fastening. In addition, the 1/4" nut driver adapter allows the SoftFinish® screwdriver to be used with the included bits and nut driver inserts.

NUT DRIVER AND BIT SET 1/4" has a ratchet wrench combined with the selection of Nut Drivers which provide flexibility to the users' work. The ratchet wrench also has fine toothing with 72 teeth, offering a short return angle. The rotation in the left or right direction can be adjusted by the integrated switching lever. When combined with the enclosed extension, it allows easy access to deep-lying screws and nuts.

The Nut Driver and extensions are locked mechanically. The change is initiated by pressing the activation button. The Nut Driver inserts are made of chrome vanadium steel which is known for its robustness and longevity. In addition, it is corrosion-resistant and easy to clean surface.

NUT DRIVER AND BIT SET 1/4" has a practical bag and a belt pouch for easy and daily storage of the set. The non-slip surface has a strong grip, even in oily or wet work situations.

Dimensions: 185 x 110 x 70mm

Standards: Based on DIN 3120 / 3122 / 3123 / 3124

Application: For installation and mounting work

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® POM CNT, POLYCARBONATE MACHINING GRADE, CL-33314 –SHR-Heavy-Duty® Swivel Hoist Rings (Standard Ring) (CarrLane), Voltage and continuity tester 0.5 - 1,000 V AC, CAT IV (wiha), Stay tuned!