



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.

We will like to also introduce to you our latest wide range of products available from CarrLane & 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 **TIVAR® 1000 (UHMW- PE)** and **RULON® LR/J**.

TIVAR® 1000 (UHMW-PE) is an Ultra-High Molecular Weight Polyethylene plastic that is made up of a well-balance property profile comprising of a low surface friction, resistance to wear and corrosion and excellent impact strength.

RULON® LR is a maroon-coloured bearing known for its versatile design properties compatible with most hardened steel substances.

RULON® J is an all-polymeric reinforced PTFE compound that performs very well against soft mating surfaces such as mild steel, aluminum, 316 stainless steel.

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

ADVANCED PRODUCT ALERT OF THE MONTH

TIVAR® 1000 (UHMW-PE)

Manufactured by



PRODUCT OVERVIEW

TIVAR® 1000 (UHMW-PE) is an Ultra-High Molecular Weight Polyethylene plastic that is made up of a well-balance property profile comprising of a low surface friction, resistance to wear and corrosion and excellent impact strength.

TIVAR® 1000 (UHMW-PE) is self-lubricating grade of plastic that sets the standard for engineered polymers and it is commonly used in industrial applications. Applications include gear, rollers, paddles, bearing, etc.

TIVAR® 1000 (UHMW-PE)



PRODUCT COLORS

- White

ADVANTAGES

- Long-wearing
- High Impact Strength
- Light in Weight
- Self-lubricating
- Abrasion and Corrosion Resistant

APPLICATIONS

- Dock Bumpers
- Protective Linings
- Conveyor Parts
- Bottling Wheels
- Bushings and Bearings
- Machined Parts
- Wear Strips
- Many Other

TYPICAL PROPERTIES OF TIVAR® 1000 (UHMW-PE)

General Properties	Test Method or UL Test	TIVAR® 1000 (UHMW-PE) Typical Values
PHYSICAL		
Density (g/cm ³)	D792	0.93
Water Absorption, 24 hrs (%)	D570	< 0.1
MECHANICAL		
Tensile Strength (psi)	D638	5,800
Tensile Modulus (psi)	D638	80,000
Tensile Elongation at Break (%)	D638	300
Flexural Strength (psi)	D790	3,500
Flexural Modulus (psi)	D790	87,000
Hardness, Shore D	D2240	66
IZOD Notched Impact (ft-lb/in)	D256	No Break
THERMAL		
Coeff. of Thermal Expansion (x10 ⁻⁵ in./in./°F)	E831	11
Heat Deflection Temp (°F/ °C) @ 264 psi	D648	116/47
Glass Transition Temp (°F/ °C)	D3418	-
Max Operating Temp (°F/ °C)	-	180/82
Thermal Conductivity (BTU-in/ft ² -hr- °F)	-	2.84
Flammability Rating	UL94	HB
ELECTRICAL		
Surface Resistivity (ohm/sq)	ANSI/ ESD STM 11.11	> 10 ¹²
Volume Resistivity (ohm-cm) at 73 °F, 50% RH	IEC 60093	> 10 ¹⁴

RULON® LR/J

Manufactured by



PRODUCT OVERVIEW

RULON® LR is a maroon-coloured bearing known for its versatile design properties compatible with most hardened steel substances. **RULON® LR** has chemical inertness as well as long life and reliability in continuous non-lubricated applications.

RULON® J is an all-polymeric reinforced PTFE compound that performs very well against soft mating surfaces such as mild steel, aluminum, 316 stainless steel. In addition, this material is “shaft friendly”, low in friction and wear as well as self-lubricating. The material has the lowest coefficients of friction among most reinforced PTFE materials.

RULON® LR/J



PRODUCT COLORS

RULON® LR:

- Maroon

RULON® J

- Light Brown

ADVANTAGES

RULON® LR

- Compatible with most hardened steel substrates
- Chemical inertness
- Long Life and reliability in continuous non-lubricated applications
- Working Temperature Range: -240 °C to +288 °C (-400 °F to +550 °F)

RULON® J

- Excellent wear and heat resistance
- Non-abrasive
- Recommended for moderate to high speed service running against soft or hard metals
- Performs well against lubricated and non-lubricated surfaces
- Working Temperature Range: -268° to +288°C [-450° to +550°F]

APPLICATIONS INCLUDE

- Bearings
- Bushings
- Cam Followers
- Thrust Washers

TYPICAL PROPERTIES OF RULON® LR/J

General Properties	ASTM or UL TEST	RULON® LR Typical Values	RULON® J Typical Values
PHYSICAL			
Specific Gravity (g/cm ³)	D792	2.25	1.95
Water Absorption, 24 hrs (%)	D570	0	0
MECHANICAL			
Tensile Strength (psi)	D4894	2,700	2,725
Tensile Elongation at Yield (%)	D4894	235	235
Hardness, Shore D	D2240	60-70	60-70
IZOD Notched Impact (ft-lb/in)	D256	-	-
THERMAL			
Coefficient of Thermal Expansion (x10 ⁻⁵ in./in./°F)	D696	-	-
Thermal Conductivity (BTU-in/ft ² -hr-°F)	D2214	2.3	1.7
ELECTRICAL			
Dielectric Strength (V/mil) short time, 08" thk	D149	900	200
Dielectric Constant at 1 MHz	D150	2.5	2.4
Dissipation Factor at 1 MHz	D149	0.001-0.004	0.0015
Surface Resistivity (ohm/sq)	D257	2 x 10 ¹³	6.3 x 10 ¹⁸
Volume Resistivity (ohm-cm) at 50% RH	D257	1 x 10 ¹⁵	8.2 x 10 ¹⁸
RECOMMENDED OPERATING LIMITS			
Maximum Load (psi)	-	1,000	750
Maximum Velocity with no Pressure (ft/min)	-	400	400
Maximum PV Rating (psi x ft/min)	-	10,000	7,500
Maximum Operating Temperature (°F/°C)	-	550/288	550/288
Minimum Operating Temperature (°F/°C)	-	-400/-240	-450/-268
Minimum Mating Surface Hardness (Rockwell)	-	C35	B25

Stud Track Roller

Manufactured by



Established in 1948, Reid Supply, a division of Essentra, also known as Reid Tool Supply back in the day, is a premier provider of over 40,000 industrial components to the North American manufacturing market. We offer a comprehensive line of quality industrial components and are well known for our broad range of clamps & work holding products, knobs, handles, & hand wheels, tooling & positioning components, feet, casters & vibration mounts

Stud Track Roller



Stud Track Roller is commonly known as cam followers are used to provide continuous and dependable motion. Applications include farm and construction, machine tools, food processing, metal-working and packaging. **Stud Track Roller** have available two different type of styles which are yoke and stud.

Stud Track Roller

Diameter: 50.8mm

Static Load Capacity: 47017.7N,10570 lbf

Dynamic Load Capacity: 35986.1N, 8090 lbf

Item Code: CCF-65

Brand: Carter Manufacturing

Follower Type: Stud

Static Load Capacity: 47017.7 N

Dynamic Load Capacity: 35986.1 N

Speed Limit: 1400 rpm

Torque: 84.7 Nm

Outside Diameter: 50.8 mm

Stud Diameter: 22.2 mm

Stud Length: 50.8 mm

Stud Thread Size: 7/8-14

Wheel Inner Bearing Type: Sealed

Material: Steel

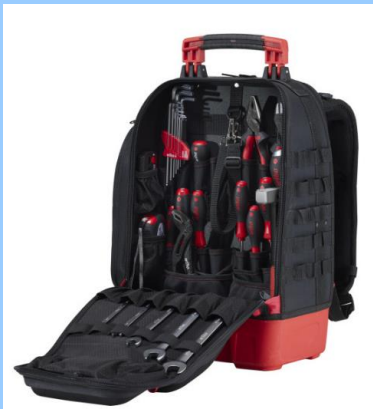
Tool backpack mechanic

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.

Tool backpack mechanic



Tool backpack mechanic has a compartment system designed to be structurally organized for convenient removal of the tools. When the backpack is open 1/3, it offers additional quick access options. **Tool backpack mechanic** has a combined total of 77 storage and 30 flexible attachment possibilities which allow users the options to configure and incorporate additional tools and accessories.

Tool backpack mechanic has a robust base tray provides a stable and firm foothold to ensure that the backpack does not tilt over. The backpack is also able to withstand dirty and wet environments as it is made of robust materials.

Tool backpack mechanic is also able to be used as a storage for laptop, cell phones and documents and can be kept separately from the tools. The backpack itself is breathable while carrying and it has a robust non-slip handle. **Tool backpack mechanic** is made of 1680D and YKK zippers which are high quality surface material.

Tool backpack mechanic has a 10-part L-key set and 14-part bit set, 7 ergonomic screwdrivers and a small compact Stubby to perform fastening work. In addition, other works such as the holding, cutting and feeding tasks which can be done using the heavy-duty diagonal cutter and water pump pliers. In addition, the backpack has other tools such as measuring tape, five ring ratchet open ended spanners and wiha locksmith hammer.

Tool backpack mechanic has universal MOLLE system which will allow the backpack to be expanded individually. In addition, the handy loops can be equipped with plenty of accessories which can be found online to expand and enhance the backpack.

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 – ANTI-STATIC PLATE PC (CC300E), DELRIN® 150SA, SLM Mounts (Vlier), Tool set mechanic (wiha), Stay tuned!