



**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® 520HR** and **TUFFAK® LF**

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

**TUFFAK® LF** sheet is a UV stabilized, flame resistant, transparent polycarbonate product.

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

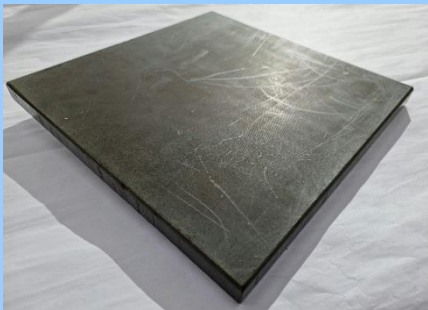
Manufactured by



### 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



### 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

### PRODUCT COLORS

- Khaki Grey

### APPLICATIONS

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

## TYPICAL PROPERTIES OF SEMITRON® 520HR

General Properties	ASTM or UL TEST	SEMITRON® 520HR Typical Values
<b>PHYSICAL</b>		
Specific Gravity	D792	1.58
Water Absorption, 24 hours (%)	D570	0.60
<b>MECHANICAL</b>		
Tensile Strength (psi)	D638	10,000
Tensile Modulus of Elasticity (KSI)	D638	800
Tensile Elongation at Yield (%)	D638	-
Flexural Strength (psi)	D790	17,000
Flexural Modulus of Elasticity (KSI)	D790	800
Compressive Strength (psi)	D695	29,000
Rockwell M Hardness	D785	108
IZOD Notched Impact (ft-lb/in)	D256	0.80
<b>THERMAL</b>		
Coefficient of Thermal Expansion (µin./in./°F)	E831 (TMA)	28
Heat Deflection Temp (°F/ °C) @ 264 psi	D648	520/280
Max Operating Temperature (°F/ °C)	-	500/250
Thermal Conductivity (BTU-in / ft <sup>2</sup> .hr. °F)	-	2.48
Flammability UL94 (3mm(1/8 in.))	-	V-0
<b>ELECTRICAL</b>		
Electric Strength (V/mil)	D149	475
Surface Resistivity (ohm / sq)	ANSI/ ESD STM 11.11	10 <sup>10</sup> – 10 <sup>12</sup>
Volume Resistivity (ohm.cm)	D257	-

# TUFFAK® LF

Manufactured by

**PLASKOLITE**

## PRODUCT OVERVIEW

**TUFFAK® LF** sheet is a UV stabilized, flame resistant, transparent polycarbonate product. **TUFFAK® LF** has a UL94 V-0 rating and at 0.080" and thicker, the product meets FAR 25.853 (a), 1, (i) requirements. Furthermore, **TUFFAK® LF** has superior dimensional stability, high temperature resistance and clarity as well as high impact strength. In addition, **TUFFAK® LF** is lightweight thermoformable sheet and it is easy to decorate and fabricate. Applications include Equipment Housings, Electrical Devices, Switchgear Covers, Light Fixtures, etc.

### TUFFAK® LF



### ADVANTAGES

- Polished surface
- UV stabilized
- Flame retardant grade UL94 V-0
- Meets FAR 25.853
- Outstanding Impact Strength
- Superior Dimensional Stability
- High Temperature Resistance
- High Clarity

### PRODUCT COLORS

- Clear

### APPLICATIONS

- Electrical Devices
- Equipment Housings
- Switchgear Covers
- Light Fixtures

## TYPICAL PROPERTIES OF TUFFAK® LF

GENERAL PROPERTIES	ASTM or UL TEST	TUFFAK® LF Typical Values
<b>PHYSICAL</b>		
Specific Gravity	D792	1.20
<b>MECHANICAL</b>		
Tensile Strength, Break (psi)	D638	9,500
Modulus of Elasticity (psi)	D638	345,000
Flexural Strength (psi)	D790	13,500
Compressive Strength (psi)	D695	12,500
IZOD Impact Strength, Notched @ 0.125" (ft.lbs/in)	D256	15
IZOD Impact Strength, Unnotched @ 0.125" (ft.lbs/in)	D256	60 (No Break)
<b>THERMAL</b>		
Coefficient of Thermal Expansion (in/in/°F)	D696	$3.75 \times 10^{-5}$
Heat Deflection Temperature, (°F) @ 264 psi	D648	270
Heat Deflection Temperature (°F) @ 66 psi	D648	280
<b>FLAMMABILITY</b>		
Flame Class @ 0.080"	UL94	V-0
FAA Flammability	FAR 25.853	
@ 0.080" – 0.250"	Part 1, a(i) – 60 sec	Pass
@ 0.080" – 0.250"	Part 1, a(ii) – 12 sec	Pass

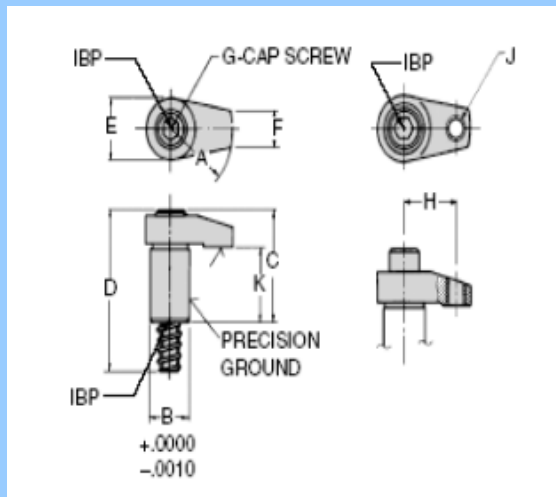
# CL-MF40-5002 • Hook Clamps Long Arm (Standard)

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.

## CL-MF40-5002 • Hook Clamps Long Arm (Standard)



## CL-MF40-5002 • Hook Clamps Long Arm

**(Standard)** are designed to be manually swing into clamping position, then clamp straight down by screw action. **CL-MF40-5002 • Hook Clamps Long Arm (Standard)** has a function that allows clear loading while swung away in unclamped position. Furthermore, this product is suitable for areas with tight spaces where a high clamping force is needed. **CL-MF40-5002 • Hook Clamps Long Arm (Standard)** is available in two types, plain arm or tapped arm. Manufactured in USA.

**Part Number: CL-MF40-5002**

**Thread Size: 1/2-13**

**A: 2**

**K: 1-17/32**

**B (Diameter): 1.0**

**L: 1-9/16**

**C: 2-1/2**

**M: 1**

**D: 3-1/2**

**Max Allowable Torque: (ft-lbs): 34**

**E: 1-1/4**

**Max Clamping Force (lbs): 2700**

**F: 11/16**

**G: 1/2-13 x 3.00**

**Thread Size, (A to M): Measured in Inches**

# SMD tweezer set Professional

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.

## SMD tweezer set Professional ESD



**SMD tweezer set Professional ESD** contains assorted 5-pieces included a box. It is used for safe work at sensitive electronic components.

### Standards:

DIN EN 61340-5-1

### Application:

Hand assembly of PCBs with SMD components or re-work activities.

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](mailto:sales@pactumax.com). We look forward to hearing from you!

Highlights from the next issue of Pactumax Monthly Advanced Product Alert – CERAMIC-FILLED PEEK®, ERTALON® 6SA / 6PLA, Quick Release Pins, GHP-135A (Reid Supply) & Tool Backpack Electric (wiha). Stay tuned!