



KINTEK SOLUTION

## Battery Material Catalog

Contact us for more catalogs of **Sample Preparation, Thermal Equipment, Lab Consumables & Materials, Bio-Chem Equipment, etc...**

# KINTEK SOLUTION

## COMPANY PROFILE

### >>> About Us

Kintek Solution Ltd is one technology orientated organization, team members are devoted to probing the most efficient and reliable technology and innovations in the scientific researching equipment, fields like biochemical reacting, new materials researching, heat treatment, vacuum creating, refrigerating, as well as pharmaceutical and petroleum extracting equipment.

In the past 20 years, we earned rich experiences in this researching equipment field, we are capable to supply both the equipment and solution according to customer's needs and realities, we have also developed lots of customer tailored equipment according to a specific working purpose, and we have lots of successful projects in many universities and institutes from different countries, like Asia, Europe, North and South America, Australia and New Zealand, Middle East, and Africa.

Profession, quick response, hard working, and sincerity is a remarkable label of our team members working attitude, which earn us a sound reputation among our clients.

We are here and ready to service our clients from different countries and regions, and share the most efficient and reliable technology together!



## Button Battery Case

Item Number: BC-01



### Introduction

Button batteries are also known as micro batteries. It looks like a small button-shaped battery. Usually larger in diameter and thinner in thickness.

[Learn More](#)

# Button Battery Case Gasket

Item Number: BC-02



## Introduction

The gasket prevents the deformation of the internal material, and the spring sheet is conducive to the tight contact inside the battery to prevent loosening.

[Learn More](#)

Model Specifications	Specifications (diameter*thickness)
CR20 gasket	φ15.8*0.5mm
	φ15.8*1.0mm
	φ15.8*1.5mm
	φ16.1*0.5mm
	φ16.1*0.8mm
CR24 gasket	φ16.2*1.5mm
	φ19.0*1.0mm
	φ20.0*0.4mm

# Cylindrical Battery Steel Case

Item Number: BC-03



## Introduction

Lithium-ion battery casing suppresses battery polarization, reduces thermal effects, and improves rate performance.

[Learn More](#)

Product ingredients	name	Battery shell 18650 explosion-proof type
	steel shell	18.0(D)*67(H)*0.25(T)mm
Assembly parts	Explosion-proof caps	3.7(T)*17.3(D)mm
	pressure limit	18-22MPa
technical indicators 26650		
Cap Cap PTC	riot cap	
Steel shell, cap material	Nitrate-plated A3 steel	
Seal O-ring and Gasket Material	nylon	
washer	PET	
Shell Dimensions (Diameter x Height)	26mm(OD)x25.5mm(ID)x68mm(H)	
Cap Dimensions (Diameter x Height)	25.5mm(D)x5mm(H)	
Dimensions of upper insulating spacer (diameter x thickness)	24.5mm(D)x0.25mm(T)	
Dimensions of lower insulating spacer (diameter x thickness)	24.5mm(D)x0.25mm(T)	
weight	18.75g/pcs	

## Li-Air Battery Case

Item Number: BC-04



### Introduction

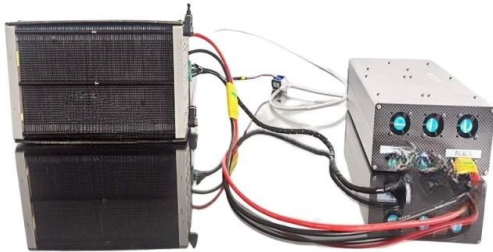
Lithium air battery (lithium oxygen battery) dedicated battery box. The positive electrode is punched from the inside out, and the inside is smooth.

[Learn More](#)

Dimensions (Dia x Height)	20mm x 3.2mm
Number of openings	17 holes (if 19 holes are required, the hole diameter is 1.2mm)
Material	SS304 Bottom case with Ø12mm x 1.0mm thick mesh disc (Ø1mm holes on it) and top case with PP (Polypropylene) sealing O-ring
Weight	0.10z (2.8 grams)
Application	Excellent for developing Zinc/Lithium-Air battery

# Hydrogen Fuel Cell Stack

Item Number: BC-05



## Introduction

A fuel cell stack is a modular, highly efficient way to generate electricity using hydrogen and oxygen through an electrochemical process. It can be used in various stationary and mobile applications as a clean and renewable energy source.

[Learn More](#)

Model	10W	20W	30W	50W	100W	200W	300W	500W
Rated output	10W	20W	30W	50W	100W	200W	300W	500W
Rated voltage (V)	6.6	1.2	7.2	12	12	24	38	24
Rated current (A)	1.51	1.67	4.17	4.2	8.34	8.34	7.9	20.84
Fan voltage (V)	4-12V							
Stack temperature								
Stack efficiency	50%							
Slices	11 pieces	20 pieces	12 pieces	20 pieces	20 pieces	40 pieces	64 pieces	60 pieces
Volume (mm)	57*42*52	110*46*48	84*64*76	92*83*56	160*143*75	104*170*70	245*100*100	140*180*167
Weight (kg)	0.155	0.29	0.2	0.3	0.8	1.01	1.5	1.95

# Battery Comprehensive Tester

Item Number: BC-06



## Introduction

The scope of application of the battery comprehensive tester can be tested: 18650 and other cylindrical, square lithium batteries, polymer batteries, nickel-cadmium batteries, nickel-metal hydride batteries, lead-acid batteries, etc.

[Learn More](#)

Model BC-06H		Model BC-06	
Measuring range:		Measuring range:	
Battery voltage measurement range:	0-10V accuracy 0.001V resolution 1mV	Battery voltage measurement range:	0 ~ 10V minimum resolution 10mV
Charge and discharge current test range:	5mA-2000mA accuracy 0.001A resolution 1mA	Current measurement range:	0~12A Minimum resolution 1mA
Battery overcurrent measurement range:	0.-20A resolution 0.01A	Internal resistance measurement range:	0~1000 mΩ, minimum resolution 1mΩ
Internal resistance measurement range:	0~999mΩ resolution 1mΩ	Identification resistance measurement range:	0.1~999.9KΩ minimum resolution 0.1KΩ
Resistance measurement range:	0.1~999.9KΩ resolution 0.1KΩ	Capacity measurement range:	0 ~ 10000mAH minimum resolution 1mAH
Capacity measurement range:	0~60000mAh resolution 1mAh		
Test speed:		Test speed:	
Static test 6 items (voltage, internal resistance, short circuit protection, charging, discharging, overcurrent):	0.1-0.3 seconds	Static test (tests all functions):	0.4-0.5 seconds
Capacity test (1C current charge and discharge): 3~4 hours	3~4 hours	Capacity test (1C current charge and discharge):	2 to 3 hours
measurement accuracy:			
1) Voltage measurement accuracy:		±0.01%FS+2 words (10V)	
2) Current measurement accuracy:		±0.1%FS+2 words (2A)	
3) Overcurrent measurement accuracy:		±1%FS+2 words (20A)	
4) Internal resistance measurement accuracy:		±1%FS+1mΩ	
5) Identification resistance measurement accuracy:		100KΩ±1%	
6) Battery capacity measurement accuracy:		60AH±×1%	
Applicable environment of the instrument:			
Temperature:		0~40°C	
Use altitude:		Use within 2Km above sea level	
Relative humidity:		40-80% humidity	
Basic parameters			



Power supply voltage:	220V±10% 50Hz
Power consumption:	up to 50W
Instrument size:	L (285mm)×W (240mm)×H (85mm)
Outer packing size:	L (320mm)×W (300mm)×H (160mm)

# 8-Channel Battery Sub-Container Capacity Tester

Item Number: BC-07



## Introduction

The Channel Lithium Battery Tester Analyzer is an eight-channel battery analyzer that analyzes small coin/cylindrical/pouch cells from 0.001 mA to 10 mA, up to 5V.

[Learn More](#)

Electricity requirement	110V AC or 220V AC selectable for universal use
Power Consumption	4W
Current	<ol style="list-style-type: none"> <li>1. Range: 0.001mA - 10mA</li> <li>2. Optional Range: 0.001mA - 1mA, 0.001mA - 5mA, 0.001mA - 10mA, 0.001mA - 20mA, 0.001mA - 50mA, 0.001mA - 200mA</li> <li>3. Accuracy: <math>\pm(0.05\%</math> of reading + 0.05% of range)</li> </ol>
Voltage	<ol style="list-style-type: none"> <li>1. Range: 5mV - 5000mV programmable</li> <li>2. Accuracy: <math>\pm(0.05\%</math> of reading + 0.05% of range)</li> </ol>
Data register conditions	Time interval: 1 - 900s
Max. measurement cycles	9999 cycles
Product Dimensions	W460mm *D350mm * H90mm
Channels	<ol style="list-style-type: none"> <li>1. Eight independent programmable channels</li> <li>2. Each channel can set different working modes and functions independently</li> </ol>
Programs & Software	<ol style="list-style-type: none"> <li>1. The software with calibration function is included to set various working modes for measuring capacity and lifecycle for all types of rechargeable batteries.</li> <li>2. Working modes Include constant current discharge, constant current charge, constant voltage charge, constant resistance discharge, rest, cycles, etc.</li> <li>3. Limited threshold conditions include voltage, current, time, capacity, negative voltage slope, etc.</li> <li>4. With real-time monitoring windows and integrated graph/data windows, the testing process can be observed more directly and efficiently.</li> <li>5. During the test, the software will provide instructions and warnings for assistance</li> <li>6. The calibration software can be used to calibrate the analyzer</li> </ol>
Test Reports and Curves for analysis	<ol style="list-style-type: none"> <li>1. Different types of curves can be created by software base on user definition. (Voltage-time curve, current-time curve, capacity-voltage curve, loops times charge/discharge capacity curve, loops times charge/ discharge efficiency curve, etc)</li> <li>2. Data reports are created by software. User can easily compare the performance of the batteries tested in channels both visually and statistically</li> </ol>
Protection and Auto-recover	If the power failure occurs during testing, the system will shut down all operating channels. Once power is recovered, the system will automatically resume those stopped channels and ensure that the test is normally conducted, so that no cases will lose any data.
Battery Holders	<p>Two types of battery holders are included in the standard package:</p> <ol style="list-style-type: none"> <li>1. 8 alligator clips with cable for universal connecting</li> <li>2. 8 spring load holders with adjustable length for measuring cylinder battery up to 70mm(H)</li> </ol>
Compliance	CE Certified
Net Weight	12 kg

# Battery Internal Resistance Tester

Item Number: BC-08



## Introduction

The main function of the battery internal resistance tester is to test the charging function, discharging function, internal resistance, voltage, protection function, capacity, overcurrent, and short circuit protection time.

[Learn More](#)

Function	Range	Measuring range	Resolution	Measurement time	precision
Internal resistance	200mΩ	2-200mΩ	0.1mΩ	10mS	±0.5mΩ
	2Ω	1mΩ-2Ω	1mΩ	10mS	± 1mΩ
Voltage	5V	0-4.999V	0.001V	10mS	±0.001V
	50V	0-49.99v	0.01V	10mS	±0.01V

## Platinum Sheet Platinum Electrode

Item Number: BC-09



### Introduction

Platinum sheet is composed of platinum, which is also one of the refractory metals. It is soft and can be forged, rolled and drawn into rod, wire, plate, tube and wire.

[Learn More](#)

0.1*5*5mm	0.5*10*10mm	0.3*10*20mm	0.5*10*30mm	0.3*20*20mm
0.2*5*5mm	0.1*10*15mm	0.5*10*20mm	0.1*15*15mm	0.5*20*20mm
0.1*10*10mm	0.2*10*15mm	0.1*10*30mm	0.2*15*15mm	0.1*30*30mm
0.2*10*10mm	0.1*10*20mm	0.2*10*30mm	0.1*20*20mm	0.2*30*30mm
0.3*10*10mm	0.2*10*20mm	0.3*10*30mm	0.2*20*20mm	

## Button Battery Storage Box

Item Number: BC-10



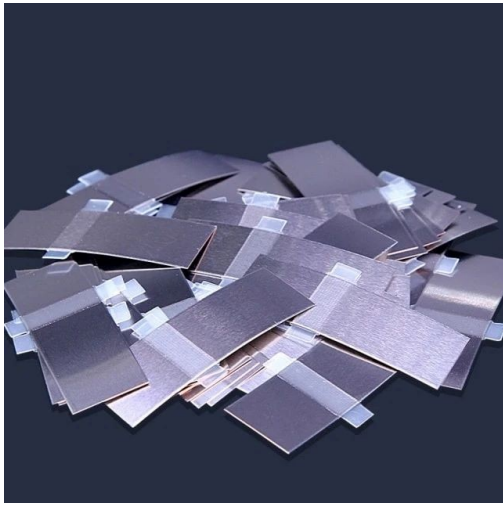
### Introduction

Button-type battery storage box, detachable, high-quality PP environmental protection material; suitable for small objects/chemicals, etc., thickened, compressive, durable, and available in a variety of styles.

[Learn More](#)

# Nickel-Aluminum Tabs For Soft Pack Lithium Batteries

Item Number: BC-11



## Introduction

Nickel tabs are used to manufacture cylindrical and pouch batteries, and positive aluminum and negative nickel are used to produce lithium-ion and nickel batteries.

[Learn More](#)

Negative electrode material	nickel	Cathode material	aluminum
tape material	white glue	tape material	J7-100
Substrate thickness	0.1±0.1mm	Substrate thickness	0.1±0.01mm
width	10±0.1mm	width	4±0.1mm
unit length	50±1mm	unit length	60±1mm
tab tape width	5±0.5mm	tab tape width	4±0.5mm
Total thickness of tab	0.3±0.02mm	Total thickness of tab	0.3±0.02mm
Adhesive strength between tab and tape	>7N/15mm	Adhesive strength between tab and tape	>7N/15mm
Corrosion resistance	Soaked in the electrolyte for 4 hours at 85°C, the material is stable, and the bonding between the lug and the substrate is stable.		

# Aluminum-Plastic Flexible Packaging Film For Lithium Battery Packaging

Item Number: BC-12



## Introduction

Aluminum-plastic film has excellent electrolyte properties and is an important safe material for soft-pack lithium batteries. Unlike metal case batteries, pouch batteries wrapped in this film are safer.

[Learn More](#)

# Aluminum Foil Current Collector For Lithium Battery

Item Number: BC-13



## Introduction

The surface of aluminum foil is extremely clean and hygienic, and no bacteria or microorganisms can grow on it. It is a non-toxic, tasteless and plastic packaging material.

[Learn More](#)

model	thickness	width/mm	Surface density g/m <sup>2</sup>	pull	pull	Elongation %
	20±um					
single sided light	20	170	53.48	≥26N/cm	(back)	≥1.8
				33	57	1.82



## 304 Stainless Steel Strip Foil 20Um Thick Battery Test

Item Number: BC-14



### Introduction

304 is a versatile stainless steel, which is widely used in the production of equipment and parts that require good overall performance (corrosion resistance and formability).

[Learn More](#)

chemical composition	C≤0.08; Si≤1.00; Mn≤2.00; P≤0.035; S≤0.03; Ni:8.0-10.0; Cr:18.0-20.0;
Tensile strength (Mpa)	620 MIN
Yield strength (Mpa)	310 MIN
Elongation(%)	30 MIN
Area reduction (%)	40 MIN
density	7.93 g/cm <sup>3</sup>
Chromium content (%)	18--20

## High Purity Zinc Foil

Item Number: BC-15



### Introduction

There are very few harmful impurities in the chemical composition of zinc foil, and the surface of the product is straight and smooth; it has good comprehensive properties, processability, electroplating colorability, oxidation resistance and corrosion resistance, etc.

[Learn More](#)

Percent Purity	99.9%
Odor	Odorless
Weight	≈0.045g/25x25mm
Form	Foil
Assay	metals basis
Chemical Name or Material	Zinc foil, 0.01±0.0025mm (0.0004±0.0001 in.) thick

# Tgph060 Hydrophilic Carbon Paper

Item Number: BC-16



## Introduction

Toray carbon paper is a porous C/C composite material product (composite material of carbon fiber and carbon) that has undergone high-temperature heat treatment.

[Learn More](#)

Properties	Unit	TGP-H-030	TGP-H-060	TGP-H-090	TGP-H-120
thickness	mm	0.11	0.19	0.28	0.37
Hydrophobic treatment	/	5% Hydrophobic	Relatively hydrophilic (without hydrophobic treatment) / 20% hydrophobic optional	5% Hydrophobic	5% Hydrophobic
Bulk density	g/cm <sup>3</sup>	0.4	0.44	0.44	0.45
Porosity	%	80	78	78	78
Surface roughness	μm	8	8	8	8
gas permeability	ml·mm/[cm <sup>2</sup> ·hr·mmAq]	2500	1900	1700	1500
Resistivity (throughplane)	mΩcm	80	80	80	80
Resistivity (inplane)	mΩcm	/	5.8	5.6	4.7
vertical [room temperature]	W/[m·k]	/	[1.7]	[1.7]	1.7
In-plane[100°C]	W/[m·k]	/	23	23	23
In-plane expansion coefficient[25-100°C]	*10 <sup>-6</sup> /C	-0.8	-0.8	-0.8	-0.8
Bending strength	MPa	40	40	40	40
Flexural modulus	GPa	8	10	10	10
tensile strength	N/cm	/	50	70	90

## High-Purity Titanium Foil / Titanium Sheet

Item Number: BC-17



### Introduction

Titanium is chemically stable, with a density of 4.51g/cm<sup>3</sup>, which is higher than aluminum and lower than steel, copper, and nickel, but its specific strength ranks first among metals.

[Learn More](#)

Titanium sheet thickness / MM						
0.01	0.08	0.4	1.2	5	12	25
0.02	0.1	0.5	1.5	6	13	30
0.03	0.15	0.6	2	7	14	40
0.04	0.2	0.7	2.5	8	15	50
0.05	0.25	0.8	3	9	18	
0.06	0.3	1	4	10	20	

# Polyethylene Separator For Lithium Battery

Item Number: BC-18



## Introduction

The polyethylene separator is a key component of lithium-ion batteries, located between the positive and negative electrodes. They allow the passage of lithium ions while inhibiting electron transport. The performance of the separator affects the capacity, cycle and safety of the battery.

[Learn More](#)

Material:	SK single layer PE film
thickness:	16 $\mu$ m
width:	115mm
Air permeability:	200s
Porosity:	44%
Heat shrinkage rate:	Vertical 3% Horizontal 1%
tensile strength:	Vertical 1200kgf/cm <sup>2</sup> Horizontal 1200kgf/cm <sup>2</sup>
Storage conditions:	The best storage environment temperature is 25 $\pm$ 3°C, humidity is 30%-70%, moisture-proof

# Lithium Battery Tab Tape

Item Number: BC-19



## Introduction

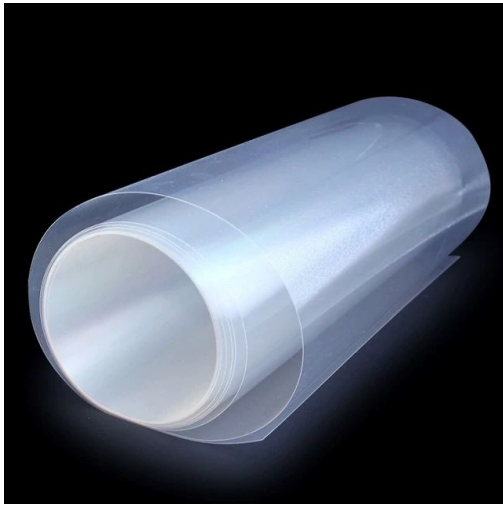
PI polyimide tape, generally brown, also known as gold finger tape, high temperature resistance 280 °C, to prevent the influence of heat sealing of soft pack battery lug glue, suitable for soft pack battery tab position glue.

[Learn More](#)

Substrate	Polyimide film
Total tape thickness	0.060mm
tape length	33m
width	2 / 3 / 5 / 6 / 8 / 10 / 12 / 15 / 16 / 18 / 20 / 25 / 30 / 35 / 40 / 50mm(optional)
Tape Adhesion	5.39 (550) N (gf)/w.25mm
Tape Tensile Strength	122.6 (12.5) N (kgf)/w.25mm
Tape elongation	50%
Temperature resistance	220°C,10min,
chemical resistance	20% HCl, NaOH/10Hrs good

## Carbon Paper For Batteries

Item Number: BC-20



### Introduction

Thin proton exchange membrane with low resistivity; high proton conductivity; low hydrogen permeation current density; long life; suitable for electrolyte separators in hydrogen fuel cells and electrochemical sensors.

[Learn More](#)

model	N-117 or N117	NafionN115	NR211	NRE-212
thickness:	183um	127Micron	25.4Micron	50.8Micron
Weight:	/	250g/m2	50g/m2	100g/m2
Specification:	10*10cm	40*40CM	61cm*L	/
Conductivity:	0.083S/cm	0.083S/cm	0.083S/cm	0.083S/cm
Exchange capacity:	0.89meq/g	0.89meq/g	0.95-1.01	0.95-1.01 meq/g

# Anion Exchange Membrane

Item Number: BC-21



## Introduction

Anion exchange membranes (AEMs) are semipermeable membranes, usually made of ionomers, designed to conduct anions but reject gases such as oxygen or hydrogen.

[Learn More](#)

Product number	Thickness	Available Size
A15-HCO3	15 microns	
A20-HCO3	32 microns	
A32-HCO3	40 microns	5*5cm; 5*10cm; 10*10cm; 20*10cm; 20*20cm; 30*10cm; 30*15cm
A40-HCO3	60 microns	
A80-H29316	80 microns	
A15R-HCO3	15 microns	5*7cm; 10*7cm; 14*10cm; 28.5*10cm;
PiperION A5 ionomer solid	PiperION-A5-HCO3 0.8g	1 bottle/half bottle
Thickness and Basis Weight	Typical Thickness (um)	Basis Weight (g/m <sup>2</sup> )
A20-HCO3	20	22.6
A40-HCO3	40	45.2
A80-HCO3	80	90.4
Physical Properties	Typical Value	
Tensile Strength(MPa)		
A20-HCO3	>30	
A40-HCO3	>50	
A80-HCO3	>50	
Young's Modulus		
A20-HCO3	>30	
A40-HCO3	>50	
A80-HCO3	>50	
Elongation at Break (%)		
A20-HCO3	>20	
A40-HCO3	>60	
A80-HCO3	>100	
Specific Gravity	1.13	



Other Properties

IEC(meq/g) 2.35

Conductivity(mS·cmOH80°C) 150

Hydrolytic Properties

Typical Value

Swelling Ratio(%80°C 1M KOH) 8

Water Uptake(%80°C1MKOH) 50

# Iridium Dioxide Iro2 For Electrolysis Of Water

Item Number: BC-22



## Introduction

Iridium dioxide, whose crystal lattice is rutile structure. Iridium dioxide and other rare metal oxides can be used in anode electrodes for industrial electrolysis and microelectrodes for electrophysiological research.

[Learn More](#)

Test items	value
Iridium content is not less than wt%	85.6
Purity not less than wt%	99.95
Specific surface area m2/g	45-66
The average particle size is not more than nm	5
Appearance	black powder
Moisture content wt%	
Analysis of impurity content	
Pt	0.002
Pd	0.0016
Au	0.0018
Ru	0.0019
Mn	0.0015
Cu	0.0011
Mg	0.0013
Al	0.0014
Fe	0.0012
Zn	0.001
Sn	0.0009
Pb	N.D

## Carbon Paper/Cloth Diaphragm Copper/Aluminum Foil And Other Professional Cutting Tools

Item Number: BC-23



### Introduction

Professional tools for cutting lithium sheets, carbon paper, carbon cloth, separators, copper foil, aluminum foil, etc., with round and square shapes and different sizes of blades.

[Learn More](#)

# Nickel Foam

Item Number: BC-24



## Introduction

Nickel foam is a high-tech deep-processing, and the metal nickel is made into a foam sponge, which has a three-dimensional full-through mesh structure.

[Learn More](#)

Aperture:	0.1mm-10mm (5-120ppi)
Porosity:	50%-98%
Porosity:	≥98%
Bulk density:	0.1-0.8g/cm <sup>3</sup>
Surface density (g/㎡)	280~3000 (±30~200)
Thickness (mm)	0.5~10 (±0.05~1.0)
Length/Width Size(mm)	70≤L/W≤500 (±0.5)

Size	Thickness 0.3 / 0.5 / 1.0 / 1.5 / 1.7mm*Width 200mm*Length 1m	Thickness 0.3/0.5/1.0/1.5/2.0mm*width 200mm*length 250mm	Thickness 0.5/1.0/1.5/1.7/2.5/2.0mm*width 200mm*length 300mm
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## Copper Foam

Item Number: BC-25



### Introduction

Copper foam has good thermal conductivity and can be widely used for heat conduction and heat dissipation of motors/electrical appliances and electronic components.

[Learn More](#)

Aperture:	0.1mm-10mm (5-130ppi)
Porosity:	50%-98%
Through hole rate:	≥98%
Number of holes in inches:	110 (110PPI)
Bulk density:	0.1-0.8g/cm <sup>3</sup>
Surface density G/M <sup>2</sup> :	280-3000(±30-200)
Thickness (MM):	0.1~40(0.05~1.0)
Number of holes PPI:	13~1300(±5~10)
Length/Width/Thickness Dimensions (MM):	70≤length and width



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