

We supply consumable products for pad printing process.

We have controlled the products quality by production team and QC team.

Along with supporting information on product usage as efficiently as possible.

And now, we are ready for the facility to produce steel plates and silicone pad in **Vietnam.**



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Quarterly Company
Newsletter

T.A.O. NEWSLETTER



Plate-Pad-Thinner-Cleaner Products For Pad Printing

Pad Printing

the process using silicone as a medium to transfer printing ink to the surface of the material to be printed. The materials used for printing can have a variety of shapes such as a toy with different shapes, bottles, cups, medical equipment, etc.

PLATE QUALITY CONTROL & ASSURANCE



←
Check the completeness and defects using a microscope



→
Check the plate depth with a digimatic depth gauge.

Plate

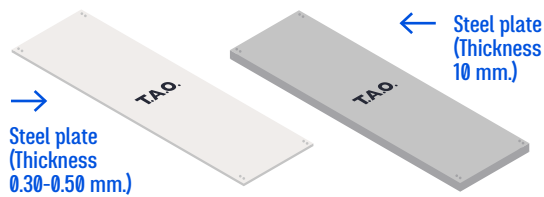
High quality engraving plates. Customers can specify the size and the punched holes on the plates as needed. There are 2 types:

Steel Plate

Our steel plates are made from handened, cold-roll high quality carbon steel. It is smooth, strong, and durable.

- ① Thin steel plates (0.30 - 0.50 mm.): recommended for medium to high job volume printing. Lifetime up to 100,000 printing cycles*
- ② Thick steel plate (10 mm.): recommended for high job volume printing. Lifetime up to 400,000 printing cycles*

* Lifetime parameter bases on condition factors (e.g. ink type / pigment size / density, image resolution, image size / dot screens) and conservation (cleaning, maintenance, storage)



Steel plate (Thickness)	Size (W x L) (Unit: mm.)
0.30 mm.	100x220, 100x250, 100x260, 100x270, 100x350 etc.
0.50 mm.	100x250, 260x580 etc.
10 mm.	100x215, 100x220, 100x250, 100x350 etc.

Advantage of steel plate

- ① Strong and highly durable.
- ② High life time.
- ③ Suitable for mass production job.
- ④ No bending, for thick steel plates.

Steel plate (Thickness)	Size (W x L) (Unit: mm.)
0.50 mm.	100x250, 100x350 etc.
0.65 mm.	100x215, 100x220, 100x260 etc.

Laser Plate

*Laser plate from high quality aluminum plate. High resolution images. Lifetime up to 30,000 printing cycles**

* Lifetime parameter bases on condition factors (e.g. ink type / pigment size / density, image resolution, image size / mesh dots) and conservation (cleaning, maintenance, storage) the image for completeness and defects using a microscope.



Advantage

- ① Good resolution images and half-tone from laser engraving.
- ② Environmentally friendly engraving process.
- ③ Not use plastic film "Computer-to-Plate (CTP)."
- ④ Easy to store, lightweight, no rust.
- ⑤ Suitable for frequent artwork change jobs.

Silicone Pad

High quality silicone pads are wide range designed for industrial pad printing applications. We can manufacture high-quality pads or your requirement, meanwhile our technical team can recommend the appropriate shape, size and hardness to suit your application.

Silicone pad : Lifetime up to 30,000-50,000 printing cycles*
*Lifetime parameter bases on condition factors (e.g. ink type / pigment size, pressure, substrate type / substrate surface, and conservation (cleaning, maintenance, storage))

Advantage

- 1 Good flexibility & Durable
- 2 Smooth surface
- 3 Good density, no air bubbles inside with special control
- 4 There are various sizes, shapes, and hardness

Many pad shape made to fit the individual print job →

THINNER & CLEANER

COMPLY ZDHC MRSL FOR TEXTILES, APPAREL, AND FOOTWEAR INDUSTRIES

ZDHC MRSL is a list of chemical substances banned from intentional use during manufacturing and related processes in supply chains in textiles, apparel, and footwear industries).

The ZDHC MRSL goes beyond the traditional approaches to chemical restrictions, which only apply to finished products (Restricted Substances List - RSL) and is focused on consumer safety. The MRSL approach also helps protect workers, local communities, and the environment from the possible impacts of harmful chemicals.

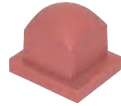
Therefore, we are aware of supporting thinner and cleaner products in compliance with ZDHC MRSL for textile industry. To meet the environmental safety and healthy trends. The big brands are joining ZDHC MRSL with the strict chemical management throughout the supply chain in textile industry.

Compliance



Interested in more information please contact K. Kitiraj Sonso
Email: kitirajs@taobangkok.co.th

Rectangle -
Rectangle



For the big area image

Round -
Round



- "Ideal" form rolling well
- Perfect ink transfer

Round -
Rectangle



- "Ideal" form rolling well
- Perfect ink transfer

Customized



- Special shape
- Tailored made upon the specifications and applications

PAD QUALITY CONTROL & ASSURANCE



Appearance & Dimension



Visually check the appearance e.g. Surface smoothness, Dimension, No blemish.

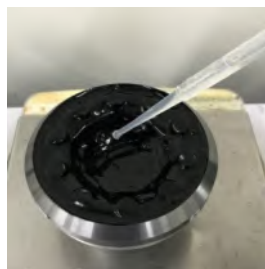
Hardness



Hardness checking with durometer in shore A.

Thinner

Thinner influences the viscosity, flow properties, and release characteristics of the ink from the silicone pad.



Cleaner

Multipurpose cleaner for pads, screens and inks, including working tools and accessories in various industry, such as Apparel, Shoes, Toys, Automotive etc.

Benefits

- 1 Protect workers from hazardous chemical.
- 2 Increase efficiency in work.
- 3 Protect the environment.
- 4 Helps protect consumer



Squeegees

are important in the screen printing process.

Their primary function is to push the printing ink through the screen mesh onto the substrate. Therefore, choosing the right squeegee is crucial for achieve high-quality and sharp prints.

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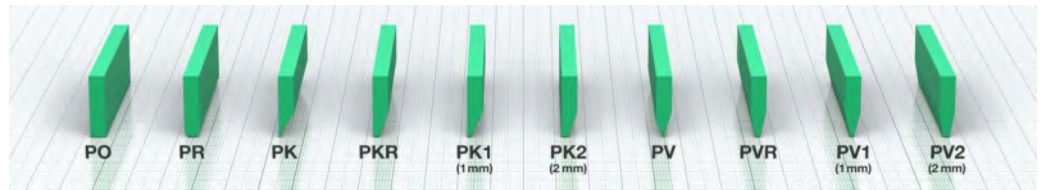
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The Importance of Squeegees in Screen Printing

Necessary factors selecting the squeegee

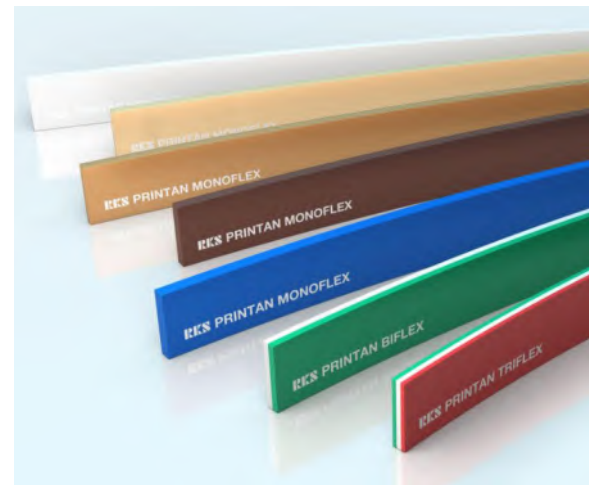
- 1 Size:** The thickness and height of the squeegee depend on the type of squeegee holder or machine model you are using. The squeegee length should be longer than the image you want to print, but it should not touch the screen frame.
- 2 Squeegee Profile:** The choice of edge/profile affects the thickness of the ink laydown.
- 3 Hardness:** Squeegee hardness directly impacts print sharpness and ink thickness.



The most common squeegee profiles

- Square edge (PO)**
suitable for general printing
- Beveled edge (PV)**
suitable for printing fine details or halftone printing
- Round edge (PR)**
suitable for high opacity require and get high ink deposit, such as textile printing

For the other types of profile we can recommend for each application.



Squeegee hardness measurement.

We use Durometer for measure the hardness by pressing the tool on the squeegee. The hardness value will read from the scale in Shore A.

In the example photo, the hardness of the rubber squeegee is 90 shore A.

The hardness of squeegee is determined by numbers. Less numbers is softer squeegee the higher numbers mean harder squeegee.

SOFT			MEDIUM		HARD	
0A	50A	60A	70A	80A	90A	100A

Hardness Value	Hardness Level	Recommended Printing Applications
55-65 Shore A	Soft	Large area prints or need high ink deposit
70-80 Shore A	Medium	Prints with both lines and large areas, medium ink deposit
85-95 Shore A	Hard	Fine line or small text prints and halftone dots printing.

Common issue after long run printing

After 30 minutes of print run, the PU squeegee starts to change their properties and squeegee performance as follow:

- ❶ **Squeegee Swelling:** Squeegees become swell when soaked in the chemicals or ink for long time. This can lead to reduced print sharpness and high ink deposition.
- ❷ **Reduced Hardness:** Squeegees slowly lose their hardness, which leads to a steeper print angle and blur images and uneven ink.
- ❸ **Squeegee Bending:** Excessive bending of squeegee can occur during continuous printing, can increase ink consumption and less homogeneity.

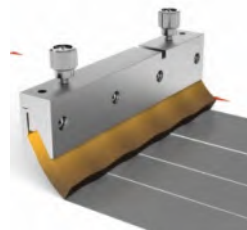
when the squeegee lost hardness most of worker will add more printing pressure but this will effect with the screen mesh and can't maintains a constant printing angle during long printing runs.



The first period of printing



After long printing run



Squeegee Maintenance

Cleaning Process :

- ❶ Recommended to clean the squeegees immediately after used to prevent chemical damage the squeegee. Avoid soaking them into the ink.
- ❷ Resting time > Allow squeegees to rest approx. 12-24 hours at room temperature for allow the solvent residual to evaporate.

Storage conditions :

- ❶ Storage: The squeegees at 20-25 °C with humidity below 70%.
- ❷ Avoid direct sunlight to maintain their properties.
- ❸ Rotation: If you're continue printing for over 6-8 hours per day, should have spare squeegees to change and allow the used ones to recover.

RKS HT3 :

This three-layer squeegee developed for the electronics industry.comesin three hardness options

SOFT	MEDIUM	HARD
65/90/65	75/90/75	85/90/85

HT3 is excellent abrasion resistance, chemicalresistance, and reducing bending during long run printing.



RKS Carbon S :

The patented RKS CARBONS HQ squeegee is used by customers all over the world who are looking for the a high reproducibility, standardisation and high quality squeegee have a carbon plate to control squeegee angle and ensure consistent ink thickness. It's ideal for precise and high-quality printing, especially for applications like solar panel or fine circuit printing.

Advantages of RKS Squeegees

- ❶ Excellent resistance to wear
- ❷ Highly resistant to solvent absorption to reduced swelling and bending
- ❸ Extended lifespan of screen mesh
- ❹ Suitable for high-speed printing

Selecting high-quality squeegees like RKS ensures consistent print quality, cost savings through fewer squeegee replacements, and uninterrupted printing during long runs.

Image Source : rk-siebdruck.de (RKS)

For more information on RKS squeegees and screen printing equipment, please contact Ms. Suparat Tansangthong at suparatt@taobangkok.co.th



T.A.O. Solution

T.A.O. Bangkok Corporation Limited is the authorized distributor of RKS squeegees, a leading and innovative brand in the screen printing industry with over 35 years of experience. RKS is focused on advancing squeegee technology and exploring new solution to meet the demands of screen printing industry and collaborates with customers to solving problems and developing the right squeegee blade for special applications.