

The Printer's Edge

A Masterclass on the Screen Printing Squeegee



ScreenPrintingNow
by Stefan Mertes  NotebookLM

Anatomy of the Instrument

Blade (Polyurethane)

The industry standard for its exceptional chemical resistance and durability. Polyurethane retains its elasticity and shape, ensuring consistent performance performance with a wide range of inks and solvents.



Handle (Aluminium)

Favoured for its rigidity and resistance to corrosion and warping. Unlike wood, aluminium provides stability in environments rich with inks and cleaning agents, ensuring a long and reliable service life.



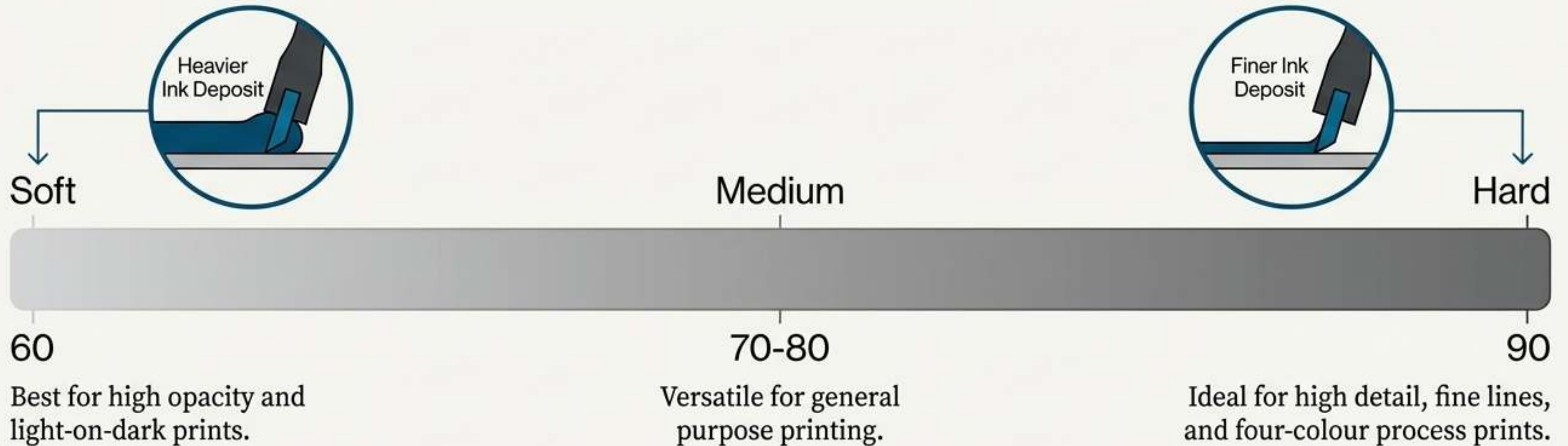
SreenPrintingNow

by Stefan Mertes

NotebookLM

Understanding Durometer: The Measure of Hardness

The durometer rating indicates the hardness of the squeegee blade on a scale of 0 to 100. For most screen printing applications, the effective range is 60 to 90.



PRO TIP

Triple-layer squeegees, which combine layers of different durometers, offer an excellent balance of rigidity for pressure and flexibility for ink transfer.



ScreenPrintingNow

by **Stefan Mertes**

NotebookLM

The Power of Layers: Rigidity Meets Flexibility

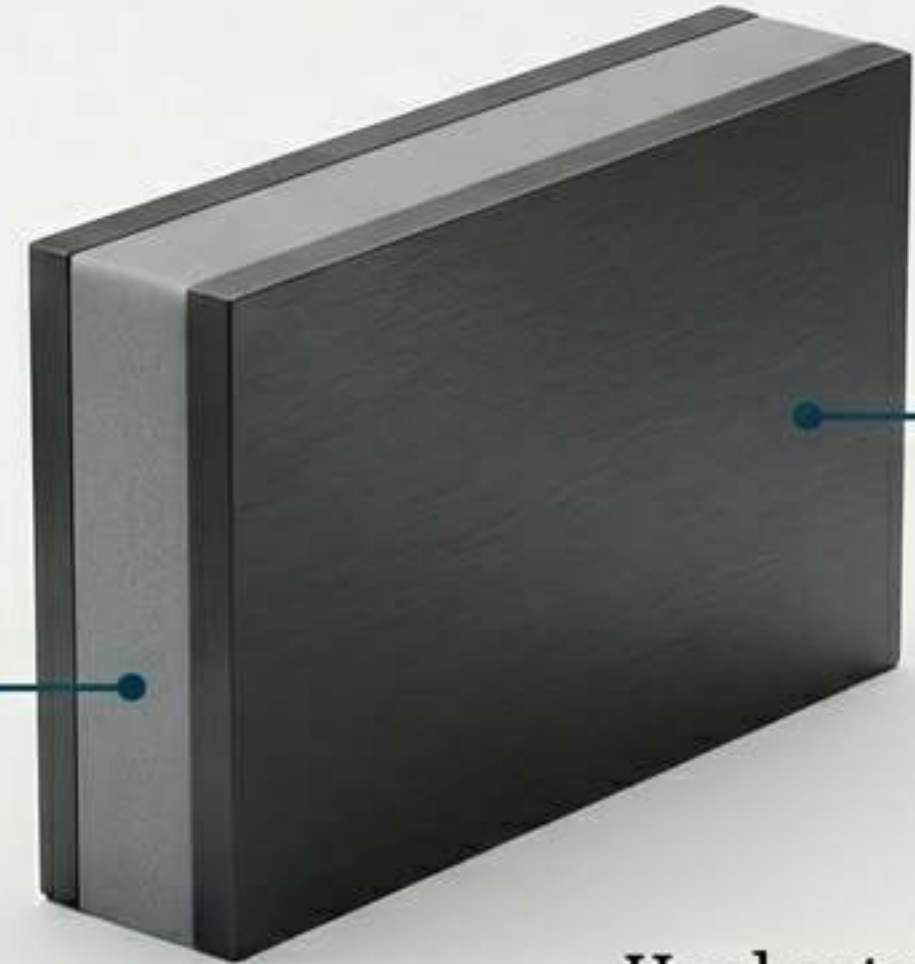
While single-layer squeegees are common, triple-layer blades offer a superior balance of properties. By sandwiching a soft core between two hard outer layers, they provide the rigidity needed for consistent pressure while allowing the flexibility for a perfect ink shear.

Single Layer



Soft inner core allows flexibility to adapt to the screen surface.

Triple Layer



Hard outer layers provide stiffness and a sharp printing edge.



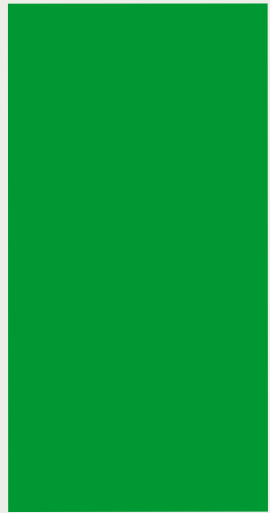
ScreenPrintingNow

by Stefan Mertes

NotebookLM

Shaping the Print: A Guide to Blade Profiles

The geometry of the squeegee's edge directly controls the amount and manner of ink deposited onto the substrate. Each profile serves a specific purpose.



Square Edge (or Straight Edge)

The all-purpose standard. Good for general printing and provides a sharp, well-defined print.



Round Edge

Deposits a heavier layer of ink. Ideal for special effects like glitter, adhesives, or when maximum opacity is required.



Bevelled Edge (or V-Cut)

Offers maximum precision and control. Used for printing on cylindrical or uneven surfaces



ScreenPrintingNow

by **Stefan Mertes**  NotebookLM

Decoding the Colours: Trust the Gauge, Not the Hue

A critical professional insight: there is no universal, industry-wide standard for squeegee colour coding. A '75 durometer' blade from one manufacturer might be a different colour from another. Relying on colour alone leads to inconsistency.



Pleiger Plastics:
Yellow = **75A**



Trelleborg:
Yellow = **70A**

Key Takeaway: For precise, repeatable results, always verify hardness with a **durometer gauge**. It is an essential tool for any serious print shop.



The Three Form Factors: Choosing Your Handle



Wooden Squeegee:

Traditional and often inexpensive, but prone to warping and difficult to clean thoroughly.



Aluminium Squeegee:

The professional standard. Resistant to corrosion, easy to clean, and provides excellent rigidity for consistent pressure. Blades are often replaceable.



Modular Squeegee:

Offers flexibility with easily swappable blades and components, like ergonomic grips. A modern, versatile option.

Recommendation: For durability and ease of maintenance, **aluminium** is the recommended choice for most professional applications.

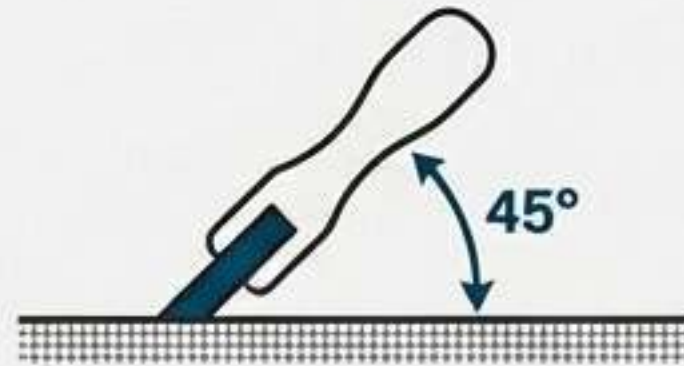


SreenPrintingNow
by Stefan Mertes  NotebookLM

The Three Pillars of Printing Technique

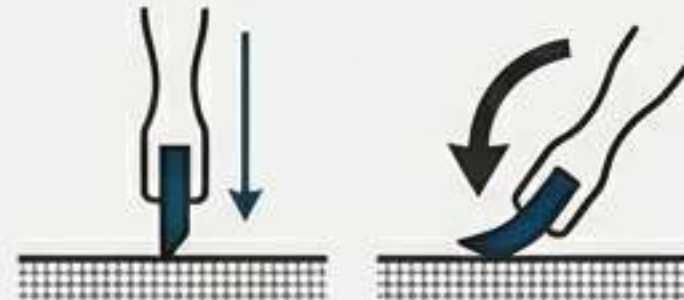
A perfect squeegee is only as good as the technique behind it. Master these three elements to control your print quality.

ANGLE



A 45-degree angle is the optimal starting point for most applications. A lower angle increases the ink deposit, while a higher angle decreases it.

PRESSURE



Apply enough pressure to shear the ink cleanly, but avoid excessive force that bends the blade. Let the sharp edge do the work.

SPEED

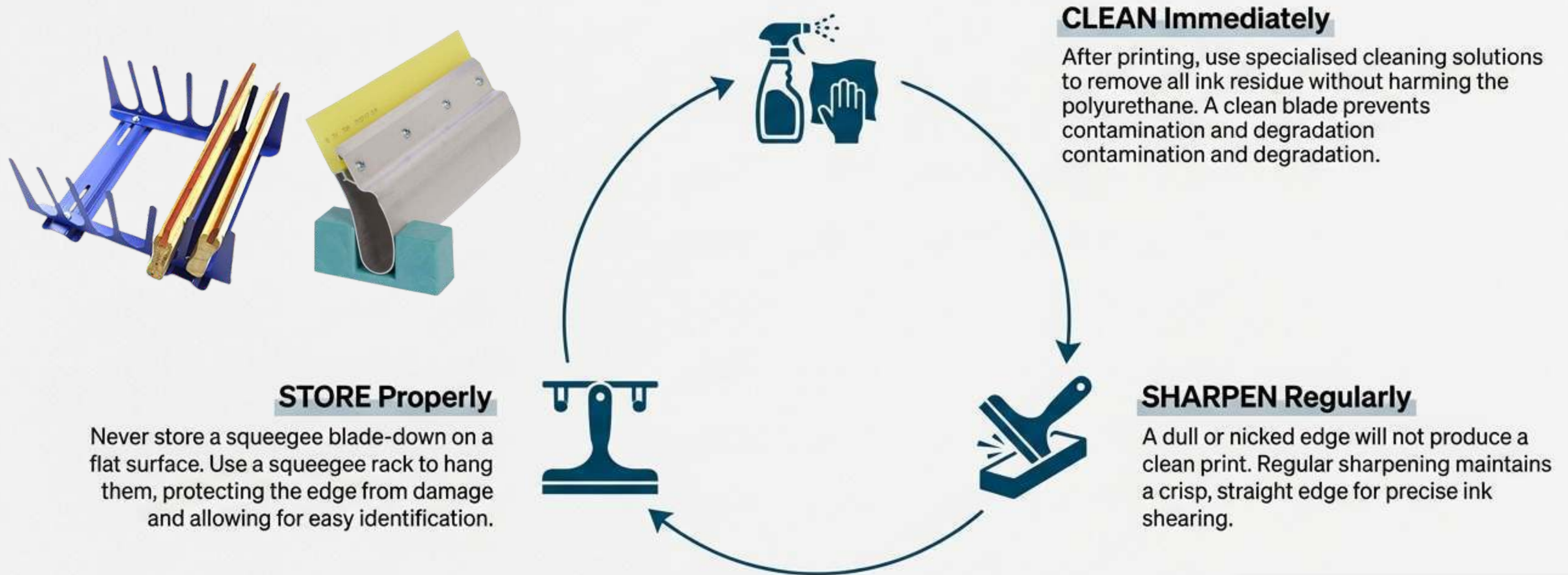


A consistent, moderate speed generally yields the best results. Adjust your speed based on ink viscosity and mesh count.



The Rituals of Care: Preserving Your Edge

A well-maintained squeegee performs better and lasts longer. Integrate these three steps into your workflow to protect your investment and ensure print consistency.



The Professional's Maintenance Toolkit



Squeegee Sharpener: A dedicated sharpener provides a perfectly straight and sharp edge, far superior to manual methods.



Automatic Squeegee Washer: For high-volume shops, an automatic washing machine ensures swift, thorough, and consistent cleaning.

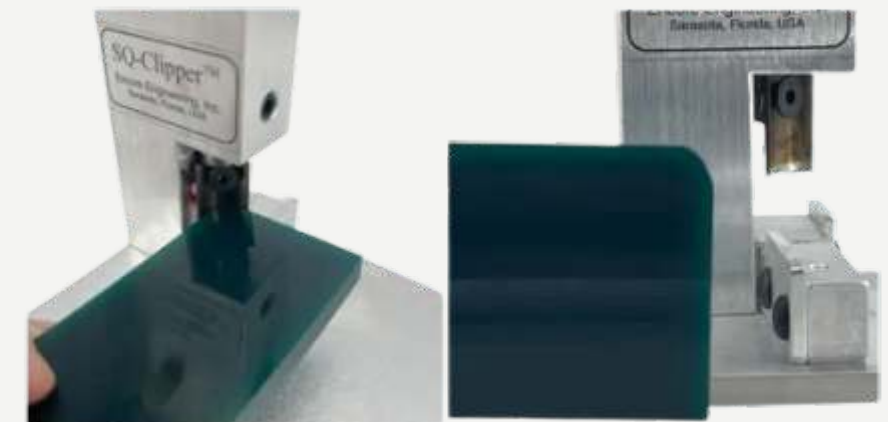


CUTTING SCISSORS



SQUEEGEE CUTTER

Knife Cutter: Squeegee material is often sold in rolls. A specialised cutter allows for precise cuts to your desired length.



Squeegee Corner Clipper: This tool rounds the sharp corners of a new blade, which helps to prevent accidental tearing of the emulsion.



Modern Innovations and Considerations

The pursuit of the perfect print continues to drive innovation in squeegee design and materials.

Ergonomic Designs

Handles like the 'EZ Grip' are engineered to reduce operator fatigue during long print runs, improving comfort and consistency.



Double-Blade Squeegees

Some modern systems use a double-blade configuration to potentially improve printing speed and quality in a single pass.



Eco-Friendly Options

Look for squeegees made from recycled materials or designs with replaceable blades. Aluminium handles are inherently economical as only the worn blade needs replacement, minimising waste.



Your Questions, Answered



Q1: What is the best squeegee handle?

A: Aluminium is recommended for its durability, rigidity, and ease of cleaning, making it the professional choice.



Q3: How are squeegees typically sold?

A: They are often available by the metre or in large rolls, allowing print shops to cut custom lengths for different frames, which is highly cost-efficient.



Q2: What is the best squeegee shape for my job?

A: Use a rounded edge to deposit more ink (e.g., for underbases). Use a sharp, straight, or beveled edge for precision and fine detail.



Q4: Any pro tips for maintenance?

A: When using aluminium handles, apply a small amount of grease to the screws. This prevents them from seizing due to moisture and ink exposure over time.



The Master's Checklist:

Five Rules for Squeegee Excellence

- 1. Match Durometer to the Job.** Hard for detail, soft for coverage. Know the specific needs of your ink and substrate.
- 2. Choose the Right Profile.** The blade's edge—square, round, or beveled—is a deliberate choice that shapes your print.
- 3. Trust the Gauge, Not the Hue.** Never assume a colour indicates a specific hardness. Always verify with a durometer gauge.
- 4. A Sharp Edge is Non-Negotiable.** A dull, nicked, or dirty blade is the enemy of a clean print. Maintain your edge.
- 5. Master Your Technique.** The perfect tool requires skilled hands. Control your angle, pressure, and speed with intention.



The path to mastery in screen printing is built on a deep understanding of your tools. Let your squeegee be more than just a piece of equipment—make it your competitive edge.

Insights and expertise for this guide are drawn from the 35 years of screen printing experience of Stefan Mertes.

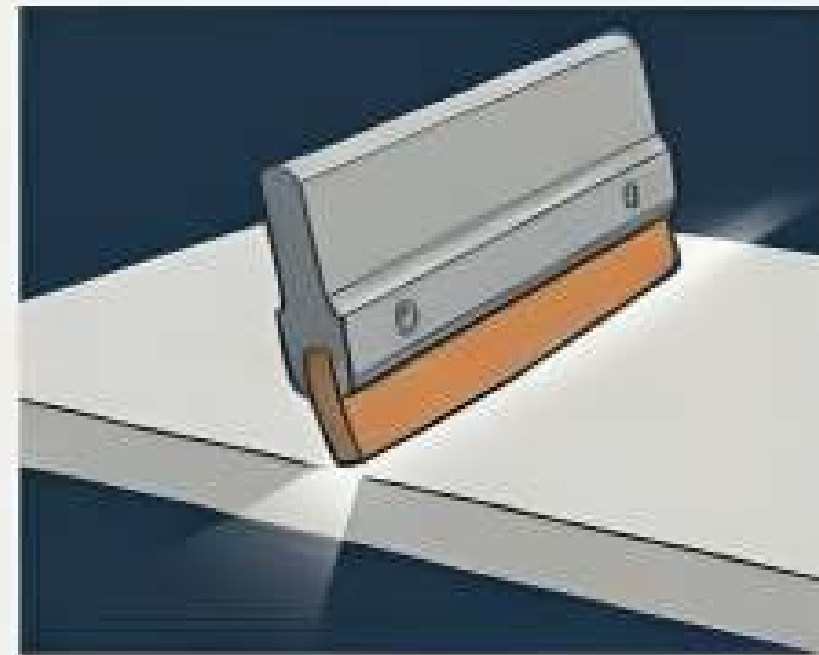


Straight-edge test

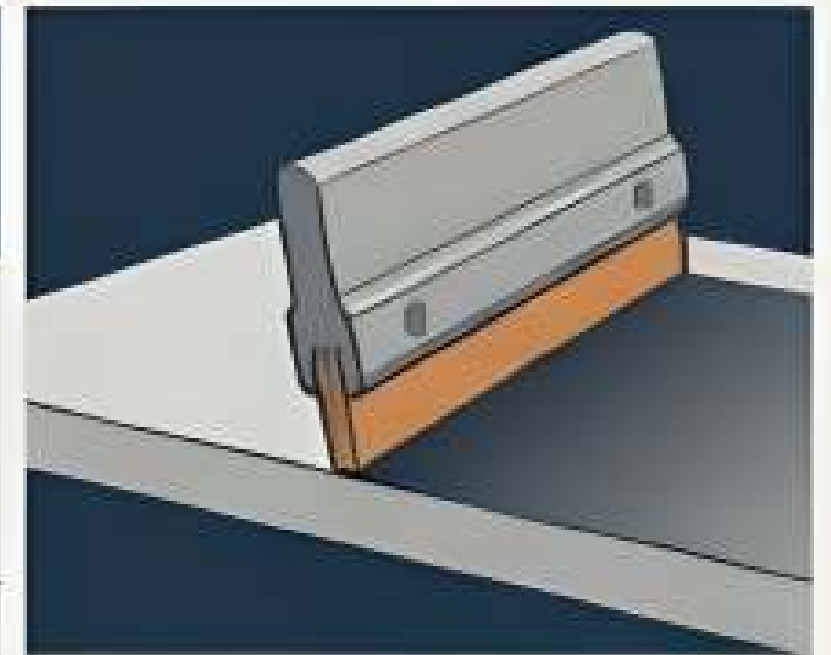
How to check if your screen printing squeegee is still straight and flat

SHOP - HACK

Place the squeegee on a flat pallet and slide it to the edge. If you see light between the blade and the pallet, the squeegee isn't flat. A properly sharpened blade sits flat, blocks all light, and prints clean and sharp.



Uneven Edge = Bad Print



Flat Edge = Sharp Print



ScreenPrintingNow

by **Stefan Mertes**

 NotebookLM