

Version: 1.0 | To all eyewear brands that strive for perfect packaging

Introduction: Why is this manual necessary?

When communicating with manufacturers, the biggest obstacle is often the lack of information. This manual is designed to decode the core technical terms used in eyeglass case production, enabling you to move from the description of "appearance requirements" to becoming a partner capable of having precise technical conversations with engineers. Understanding these terms is the foundation for controlling quality and realizing design concepts.

Chapter One: Materials Science

PU/PVC Leather

Definition: 1. Polyurethane (PU): Available in stock, with various colors and patterns. Usually, a thickness of 0.6-0.9mm is used, which is determined based on the actual product. It is also divided into 100% PU, 80%, 50% PU, 30% PU... Most merchants do not specifically indicate the exact content. We recommend using 100% PU for better environmental protection and durability.

2. PVC-based imitation leather material. It is made through a foaming process. 1.0-3.0mm thickness, more solid and harder, suitable for countries and regions with small temperature differences throughout the year. Its biggest feature is that in summer, the hardness is relatively softer, and in winter, it is relatively harder. Stock is limited, patterns are few, and colors are numerous. The minimum order quantity is high.

Leather: Only a few brands use leather. The significance of leather is that the animal's skin is the true leather. The price is calculated based on feet rather than meters or yards.

Ultra-fine fiber leather: Leather made from processed fragments of animal skin (some merchants call it genuine leather). The price is calculated in meters, which is cheaper than leather, but still very expensive.

For environmental protection and ecological conservation, many merchants do not use leather.

Key parameters: Patterns, colors, thickness, feel (soft, hard, texture), environmental protection level (whether it contains azo dyes, phthalates).

Application: Constitutes the main body of the eyeglass case, determines the first touch and durability.

Inner lining material

Fleece: Attach fine short fibers to the surface of the base material to provide soft and slip-resistant protection.

Disadvantage: It has fine fuzz that can fall off and cannot be completely cleaned up, which can reduce the shedding of loose fibers.

Felt fabric: Bottom fabric classification: Suede felt, cotton bottom (very soft), knitted bottom (soft), non-woven fabric bottom (moderately hard).

Fur: Long fur, medium fur, short fur.

Generally, the inner fur requires being soft to better protect the spectacle lenses.

Sponge/EVA: Ideal material for mold hot pressing molding, which can be precisely shaped to fit the frame and provide the best shock resistance. Density is a key indicator.

Environmentally friendly pulp: Made from recycled paper, it can naturally decompose and is the core choice for sustainable packaging.

Special paper/Art paper: Definition: High-quality paper used for the outer box of the lid. Ordinary printing paper and imported paper.

Key types:

Ivory card: Hard texture, soft color, smooth touch.

Pearl paper: Has a pearl-like luster on the surface, enhancing the sense of luxury.

Touching paper: Has a subtle napped or textured touch on the surface.

Key parameters: Weight (such as 200gsm, 250gsm, 300gsm, the higher the number, the thicker the paper).

Chapter 2: Forming and Structural Processes

Laser Precise Cutting

Definition: Using laser blades to cut materials with die-cutting tools.

Core Value: Single-piece cutting, ensuring that the edges of each piece of material are absolutely smooth and have no burrs.

Why It Matters: This is the sole prerequisite for achieving the top-level ink edge sealing process. The fibrous frayed edges produced by ordinary cutting methods will result in uneven edge sealing.

Mold hot pressing molding

Definition: Place the material in a custom mold, and through precise control of temperature and high pressure, permanently shape it and complete the internal bonding.

Core value:

Structural integration: Transform the eyeglass case from "bonded planes" to "integrated three-dimensional structure", doubling the strength.

Complex curved surfaces: Can precisely achieve any complex arcs and turns in the design drawing.

Invisible bonding: Complete the firm connection of the inner lining and framework simultaneously during the molding process, with no visible trace on the appearance.

Blade die stamping

Definition: Using pre-made steel blade dies to perform batch cutting of materials. Using pre-made steel or iron blade dies to perform batch cutting of materials. Place the surface leather layer and the middle layer material in a custom mold, and through the precisely controlled edge positions of the mold, and then using the folding edge method, make the edges smooth and complete the internal bonding.

Advantages: High efficiency, suitable for large-scale production of standard shapes.

Compared with laser: The edges are physically cut, which may produce tiny material fibers, but through post-processing, the edges can also be made smooth.

Chapter Three: Surface and Decorative Techniques Screen printing

Definition: The process of printing ink onto a product through a screen plate.

Features: The ink layer is thick, with a slight raised texture, and the color is rich. It is highly suitable for single-color logos or bold line patterns.

Sticky paste printing

Definition: Using a screen plate to apply ink with glue onto the product.

Characteristics: The ink layer is thick, with a slight raised texture, and the color is rich. It is very suitable for single-color logos or thick-line patterns. It is very suitable for fabrics with long hair on the surface, and it will not fall off, being much more stable.

Gold Foil Stamping / Silver Foil Stamping

Definition: Using the high temperature and pressure of the stamping machine, the electroplated aluminum foil is transferred onto the surface of the material.

Key Parameters: Material of the stamping plate (copper plate is the most fine), type of foil (color, brightness, texture).

Effect: Instantly enhances the luxury and sophistication of the brand.

Stamping Convex/Concave

Definition: Using the accompanying concave/convex molds, create raised or recessed graphics on paper or leather.

Effect: Create a highly sophisticated tactile layer without the need for ink, being subtle yet profound.

Ink edge coating

Definition: Apply matching paint to the edges of the cut leather or PU and then sand them smooth.

Core prerequisite: Must be based on the smooth edges cut by laser molds.

Top-level effect: Achieve a touch as smooth and fine as that of ceramic, which is a hallmark detail of high-end products.

Chapter 4: Opening and Closing with Magnets or Buttons

Definition: Opening and closing through the magnetic force of magnets, or the spring mechanism of buttons.

Core Premise: The size and magnetic strength of the magnets affect the firmness of the opening and closing.

Effect: There is a "clicking" sound during the opening and closing process, which enhances the quality of the product. The smoothness and firmness of the opening and closing are of great importance.

Chapter Five: Core Terms of Quality Control Color difference

Definition: The deviation between the final product color and the confirmed standard (usually a Pantone color chart, typically using the color numbers of the C card or U card).

Standard: The industry-accepted ΔE value should be less than 2.0, and the difference is imperceptible to the human eye.

Registration accuracy

Definition: The positional alignment error between multiple layers of printing or different processes (such as foil stamping and printing).

Standard: The error should be less than 0.2mm.

Opening and closing feel

Definition: The force and smoothness of the magnetic snap or hinge during the opening and closing process.

Test: Usually, it needs to pass 5000 opening and closing tests without any abnormalities.

Conclusion

Mastering these terms will enable you to:

Accurately assess the professional depth of suppliers.

Transform abstract design concepts into executable production instructions.

Targetedly inspect key quality nodes during the inspection stage.

This manual is the key to your journey towards a professional supply chain.

When you can fluently use this "language", you are close to achieving your ideal packaging.

If you have more questions, please contact us for a free brief answer.

Jiangyin Xinghong Eyeglass Box Co., Ltd. / Professional Eyeglass Packaging Solution Partner