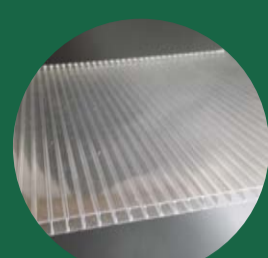




# 6 QUESTIONS

## TO ASK WHEN SELECTING MATERIALS AND FINISHING OPTIONS FOR GRAPHIC OVERLAYS

### 1 Which material is better: Polycarbonate or Polyester?



**POLYCARBONATE**  
(A.K.A. PETG OR LEXAN)

- Available in various thicknesses and surface finishes
- High-performing material with excellent mechanical properties
- Optically clear at any thickness and provides a crisper emboss
- Overlays are easy to die cut, print, and texture
- Excellent choice for a wide variety of applications
- Resistant to heat, moisture, and abrasion
- May show signs of wear after 100,000 actuations
- Needs hard coat if environment is subject to chemicals
- Lower in cost than polyester
- Most users prefer the look of polycarbonate overlays versus polyester



**POLYESTER**

- Resilient material offers superior resistance to chemicals and harsh environments
- Perfect for construction, industrial, and military applications
- Offered in various thicknesses with a range of textures and anti-glare finishes
- Better suited for use with tactile feedback switches
- It shows no sign of wear after 1,000,000 actuations

### 2 What types of finish options are available?

#### MATTE OR GLOSSY

A gloss material can enhance the overlay's colors. A matte finish can reduce glare issues and doesn't readily show fingerprints or minor scratches.

#### TEXTURED SURFACES, EMBOSING, DEBOSSING

While aesthetically pleasing, these options can directly improve the user experience.



#### WINDOW CUTOUT AND LENS COATING

At Design Mark, options include anti-glare (LED, VF, LCD), velvet texture (enunciator, LED), gloss or water clear (LCD), and window insert. Color dyes can be added to produce red, green, yellow, or other tinted LCD displays.

#### CHEMICAL RESISTANT SURFACES

Will your Graphic Overlay be exposed to cleaning products or industrial chemicals? If so, add "chemical resistant surface" to your design specifications. You may also want to environmentally seal or liquid seal your Graphic Overlay.

#### ULTRAVIOLET (UV) HARDCOATS

Both polycarbonate and polyester are susceptible to scratching. We recommend a UV hardcoating (or another hardcoat) to increase the durability of your Graphic Overlay. Of course, if your product will be used outdoors, a UV hardcoat is a must.

### 3 Which options enhance user interface?

When it comes to graphic overlays, usability is the name of the game. Textured surfaces can help users locate keys more easily, which can improve human-machine interface in low-lighting situations and other environments. Embossing (or debossing) will increase the tactile quality of your Graphic Overlay, which can directly impact usability.



### 4 Are there cost-saving tips?

For every Graphic Overlay, the goal is to design an easy-to-use interface, aesthetically pleasing design, and durable construction. Plus, with many projects, budget is a concern.

#### HERE ARE A FEW COST-SAVING TIPS:

- Use the **minimum number of colors** possible.
- **Choose polycarbonate** instead of polyester.
- Ensure your specs don't call for embossing or debossing. The creation of a **custom die adds cost**, and this is an added step in the production process.
- **Avoid tight tolerances, tiny graphics, extremely thin lines** and serif fonts, which can make production more challenging and time intensive.

### 5 Can the manufacturer offer advice on materials and finish options – advice that is backed by a depth of experience?

#### EXPERTISE BASED ON HANDS-ON EXPERIENCE

How long has the company been designing and manufacturing graphic overlays? Are there in-house designers and engineers? Can they guide you to choose the proper materials and finish options for your application?

#### QUALITY AND COMMUNICATION

Is the company ISO-certified? Can you rely on clear, consistent communication? (Miscommunications can endanger your project's delivery date.)

#### TOTAL LEAD TIME REQUIRED

How much time is required for design, manufacturing, and delivery? (Offshore manufacturers require much longer lead time due to shipping.)

### 6 Does the Graphic Overlay manufacturer offer rapid prototyping?

In your selection process, make sure the Graphic Overlay company offers **quick-turn prototyping to fully support your design process** with shorter lead times.

At Design Mark, we offer a **Rapid Prototyping service** that offers flexibility in product development.

You can **get a quick-turn prototype for a fully functional prototype or a pre-production part.**

