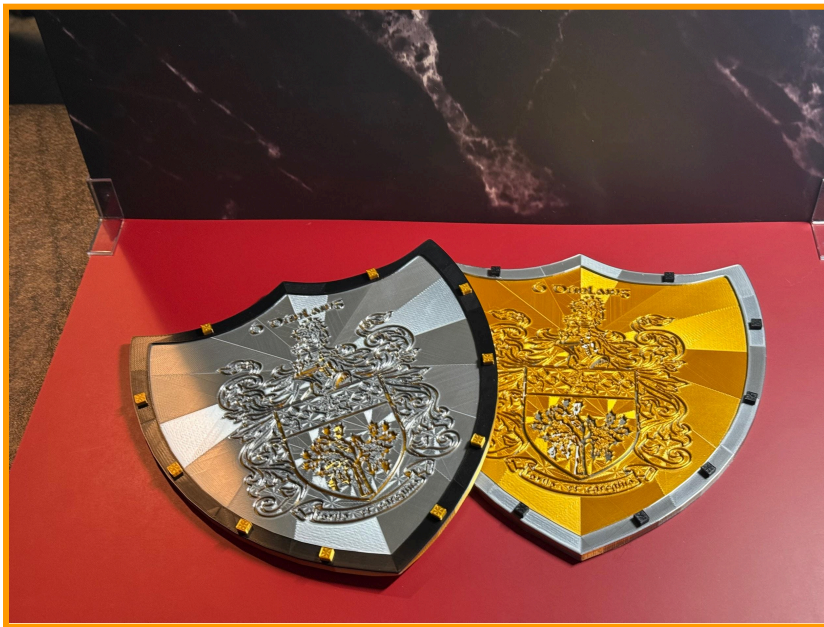# 3D-BG

Customer's Guide to **Top Surface** Patterns

Overview

At [3D-BG.com](3D-BG.com), we strive to create quality products that function well and look great. One thing to consider for your project is the **top surface patterns**.

What are surface patterns?

3D printer surface patterns—also known as top/bottom fill patterns—affect the appearance, strength, texture, and print time of your prints' top and bottom layers (not the infill inside the object).
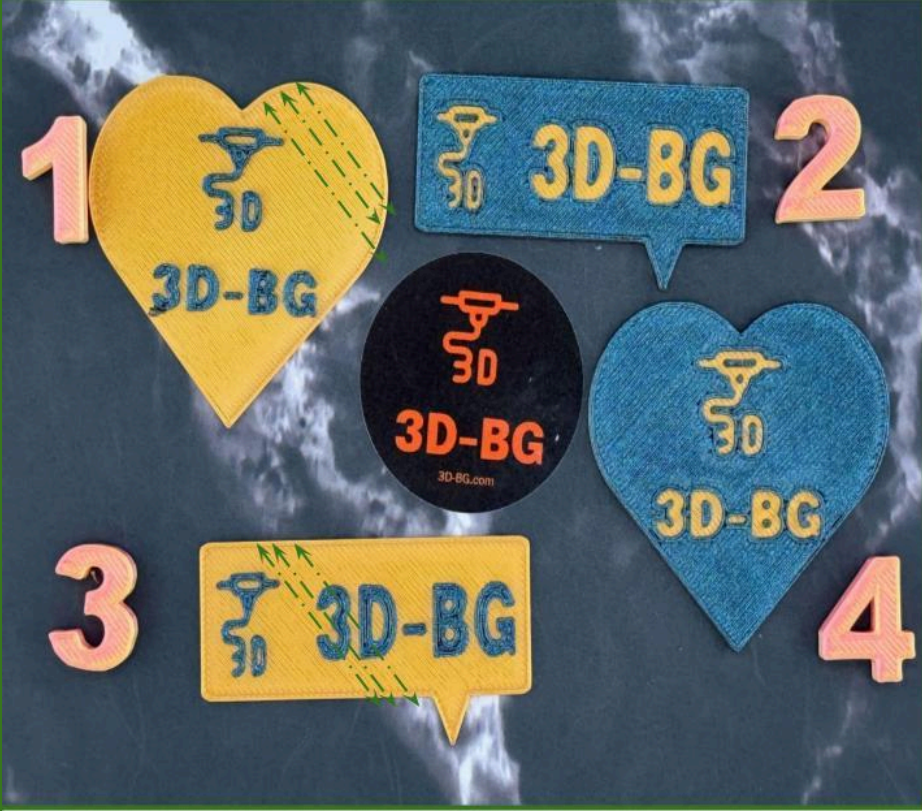
Surface Choices

Surface Pattern	Appearance	Speed	Strength	Best For
Monotonic Lines (Default)	Evenly spaced uniform lines	★★★	★★★	Smooth, clean top surfaces
Concentric	Ripple-like circles from the model center	★★★	★★	Rounded/curved shapes, aesthetics
Zig-Zag	Alternating line direction per layer	★★★★★	★	Fast prototypes
Grid	Crisscrossed perpendicular lines	★★	★★★	Flat surfaces with extra strength
Hilbert Curve	Space-filling, maze-like square pattern	★★★	★★	Artistic textures, layered detailing
Archimedean Chords	Spiraled concentric arcs (smooth)	★★★	★★	Elegant surface finish, circular models
Octagram Spiral	Geometric spiral with eight-pointed shape	★★	★★	Decorative models, stylized effects

Surface Pattern Examples

Below are the options for 3D-BG.com surface patterns.

1. Monotonic (Grid) Lines
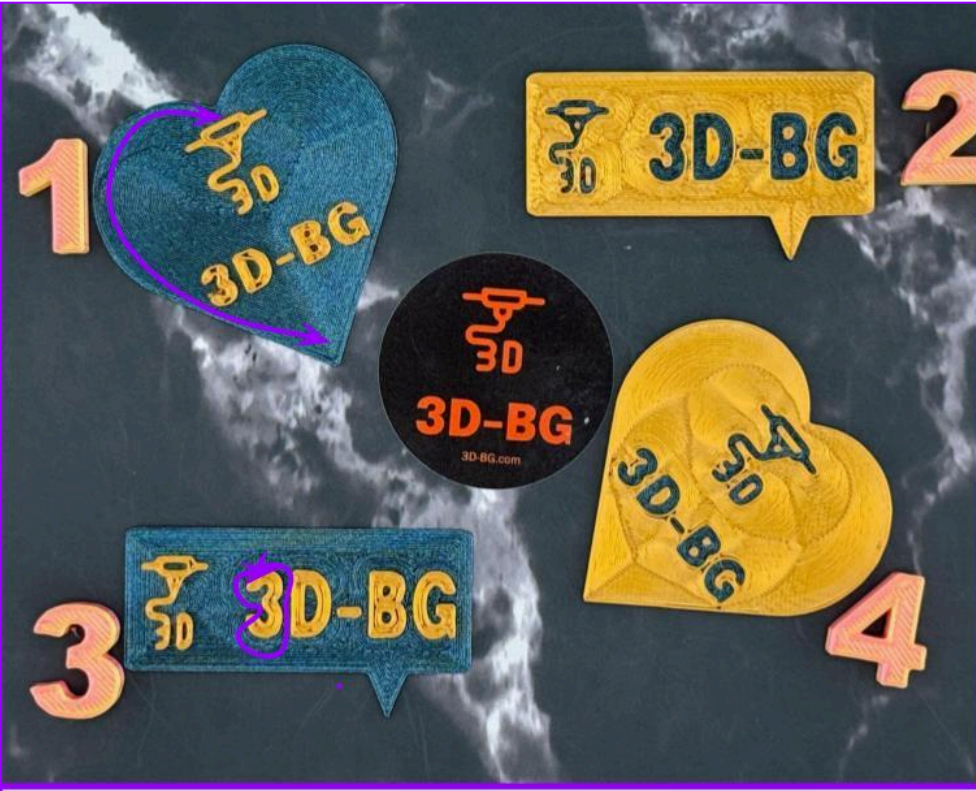
Surface Pattern	Appearance 💩	Speed ⚡	Strength ☀	Best For 🏆	🗇
Monotonic Lines	Evenly spaced uniform lines	⭐⭐⭐	⭐⭐⭐	Smooth, clean top surfaces	

2. Concentric

Surface Pattern	Appearance 💩	Speed ⚡	Strength ⚙	Best For 🏆	🗇
Concentric	Ripple-like circles from model center	⭐⭐⭐	⭐⭐	Rounded/curved shapes, aesthetics	

3. Hilbert Curve

3) Textured Finish = Hilbert

Appearance
- Beautiful maze-like texture; visually unique
- A space-filling fractal pattern that creates a maze-like, rectangular labyrinth appearance on the surface.

Recommendations
- Matte PLA
- Artistic or decorative prints where a distinctive surface texture is desired.

Surface Pattern	Appearance 💩	Speed ⚡	Strength ⚙	Best For 🏆	🗇
Hilbert Curve	Space-filling maze-like square pattern	⭐⭐⭐	⭐⭐	Artistic textures, layered detailing	

4. Octo-Spirals

Surface Pattern	Appearance 👃	Speed ⚡	Strength ⚙	Best For 🏆	🗂
Octagram Spiral	Geometric spiral with eight-pointed shape	⭐⭐	⭐⭐	Decorative models, stylized effects	

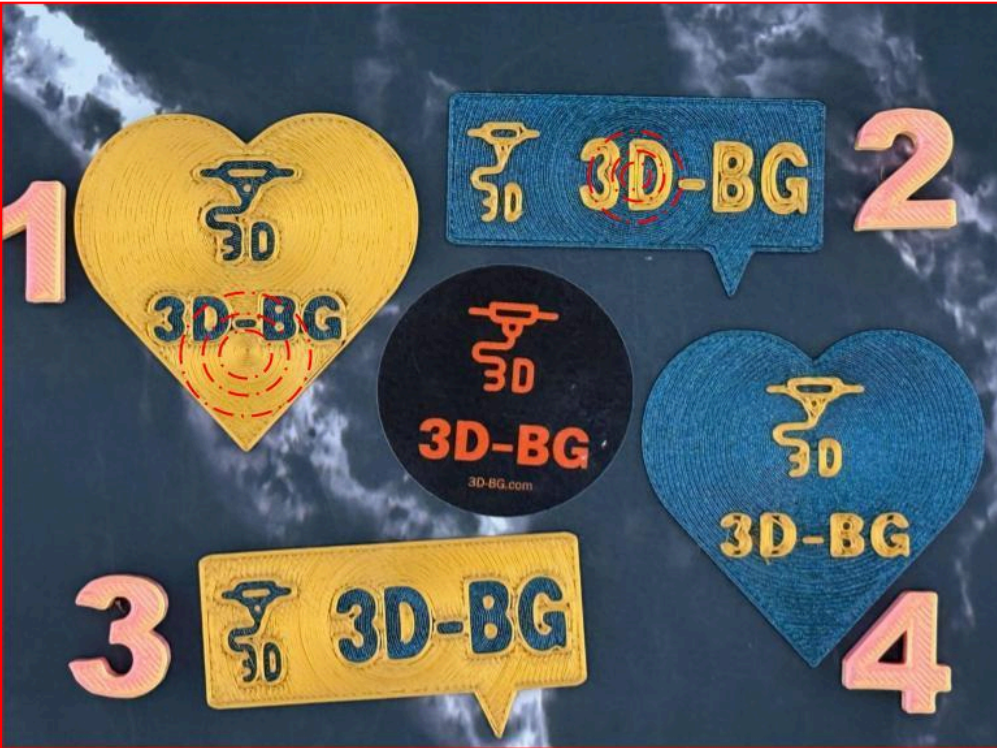**4) Pinwheel = Octagram Spiral**

Appearance
- Geometric spiral with eight-pointed shape

Recommendations
- Best for decorative models, stylized effects
- Works well with silk & metallic filament.
- Eye-catching and complex; great for art prints
- Not suited for functional parts or fast prints

5.   Archimedian Chord