

Materials Guide & Reference Library

Aurora Borealis & Specialty Drill Behaviour

Why they don't behave like standard drills, and why they shouldn't

SECTION 1 - Observation

When working with specialty drills, Aurora Borealis (AB), Crystal, Metallic or Glow, painters often notice:

- they don't slide into rows as easily
- they resist straightening
- they sit slightly higher than surrounding drills
- alignment looks less uniform

At first this feels like a manufacturing inconsistency.

But even high-quality specialty drills behave this way.

SECTION 2 - Mechanism

Standard acrylic drills are designed for grid consistency. Specialty drills are designed for light interaction. To create sparkle, coatings are applied to the surface:

- AB coatings create refracted reflections
- metallic coatings create directional reflection
- crystals refract through faceted surfaces
- glow pigments alter surface structure

These coatings slightly change the geometry of the drill:

They increase surface friction

They alter edge contact

They prevent perfect edge-to-edge seating

This is intentional.

A perfectly flat grid reflects light evenly.

A varied surface scatters light dynamically.

SECTION 3 - Studio Method

We treat specialty drills differently during placement.

They are placed for position, highlights and sparkle – not grid precision.

Straightening should be applied lightly or avoided over large specialty areas.

Instead of forcing alignment, allow natural variation to remain.

The sparkle effect depends on micro-variation across the surface.

SECTION 4 - Mechanism

Standard drills produce:

- clarity
- detail
- smooth gradients

Specialty drills produce:

- highlights
- shimmer
- focal points

They serve different visual purposes. Trying to make specialty drills behave like standard drills reduces their effect. Their irregularity is the feature.

SECTION 5 - Practical Takeaway

- Do not over-straighten specialty areas, slight misalignment enhances sparkle
- Minor height differences are normal
- Mix with standard drills for best effect, use specialty drills as accents, not structure.



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STUDIO NOTE - CONTEXT & LIMITATIONS

Many kits overuse specialty drills expecting more sparkle.

In practice, too many reflective surfaces cancel contrast.

Effective use is selective, placed where light should attract attention.

The goal is not maximum shine, the goal is controlled emphasis.