"WaxGate Effects"
Dr. Dave Alciatore, PhD

Supporting narrated video (NV) demonstrations, high-speed video (HSV) clips, technical proofs (TP), and all past articles are available online at drdavepoolinfo.com. Reference numbers used in the articles help you locate the resources on the website.

If you are a pool fan, you have heard about the recent WaxGate controversy following the July 2025 $1M World Championship in Saudi Arabia. The topic really blew up on social media in response to a couple of Facebook posts by Eklent Kaci who claimed some players were purposely putting wax or Silicone on the cue ball (CB) to make it react in unpredictable ways. This would help the player who applied the wax, since they would know how to change their play immediately, as opposed to the opponent, who might not adjust as quickly and might miss shots or positions as a result. At the worldclass level, this could cause loss of the game, match, and tournament. I won't be getting into all the social-media drama in this article. Instead, I focus on all the ball reaction effects that occur under very slick conditions resulting from new cloth and polished balls, whether or not an extra substance is added to the CB by an unethical player.

Image 1 Recently online videos dealing with WaxGate and slick-condition effects

My recent online videos on this topic (NV L.95 and NV L.96) cover some of the WaxGate drama and show all effects of slick conditions or waxed balls (see the video thumbnail images in **Image 1**). The effects include:

1. **Draw is much easier** since less backspin is lost on the way to the object ball (OB) due to less friction between the CB and the cloth.

2. **Sidespin reacts less off cushions**. I will cover this in detail below.

3. **Pockets play larger** since balls can more easily slide off the pocket points and facings without picking up much spin that can cause a ball to rattle out.

4. **The CB persists on the tangent line longer** with draw and follow shots at an angle. Because there is less friction, the CB peels out and takes longer to curve.

5. **Follow shots stall off rails**. I will cover this in detail below.

6. **Rolling kicks and banks go longer** since the CB experiences less sideways resistance from the cushion due to less friction. Also, more of the topspin remains on the ball after rebound (again due to less friction), allowing the ball to curve forward more after rebound.

7. **Balls throw less** because there is less friction between the balls.

8. **Kick-and-stick shots react differently**. When kicking nearly straight into a rail, normal conditions cause a rolling CB to leave with stun resulting in stopping action if an OB is hit full. But with slick

conditions, some of the topspin is retained, acting like backspin after rebound. This can cause the CB to head back to the cushion after hitting an OB.

9. **Shallow-angle follow-shots scratch more easily**. Under normal conditions, a follow shot at a small angle to a rail causes the CB to bounce away from the rail enough to avoid a scratch. But under slick conditions, the retained topspin can send the CB back toward the rail into the pocket. Also, as mentioned above, the pocket plays larger under slick conditions, making the scratch even more likely.

10. **Massé shots are more impressive**. Less friction between the CB and cloth allows the tip to impart more spin to the CB as it is driven down into the table, and the CB swings out wider as the spin peels out over a larger distance. The extra spin also helps the ball curve more.

11. **2- and 3-rail kicks with running spin go long** since the sidespin doesn't react much on the first rail and the CB swings out more on the way to the 2nd rail.

12. **Jump shots are slightly easier, especially with jump draw.** Under typical conditions, because there is friction between the CB and cloth, there is resistance to forward motion and not much backspin is imparted to the CB. It also wears off quickly with each bounce. Under slick conditions, more backspin can be imparted and the backspin doesn't wear off as much during the bounces.

13. When using sidespin, **the CB deflects more**. I will cover this in detail below.

All these effects are all discussed and demonstrated in detail in the videos, but let's look at a few in detail here. **Image 2** shows a test shot used to show how sidespin reacts less off cushions. I am shooting straight across the table with maximum right spin, attempting to pocket the 7. Under normal conditions, I can easily kick to the 7 from this CB position. Between the first and second videos, I had my rails changed with new cloth on the cushions, which plays slick. Because there is less friction, the sidespin doesn't have as much effect. An untreated CB heads short of the 7 to the white-circle position shown in Image 2. Using the same tip position and shot speed, a CB waxed with Turtle Wax comes up well short of that (see the green circle). A CB sprayed and wiped with Silicone comes up even shorter (see the red circle). Silicone lubricant makes the CB even slicker than wax, causing less sidespin reaction on the cushion.

Image 2 Maximum sidespin kick results for new cloth, Turtle Wax, and Silicone Spray

Image 3 shows a shot I used to demonstrate how follow shots react when the OB is close to a rail. I am attempting to follow off the 7 to rebound off the foot rail to head up-table for the 8 (under my arm). Under normal conditions, the CB easily follows the yellow path off the rail. However, with a waxed CB, topspin remains on the CB after rebound, acting as backspin, causing slowing and stall, as indicated by the red line in the image. As shown in the video, the stalling action still occurs even with a thinner hit. And at a fuller hit, the effect is even more dramatic.

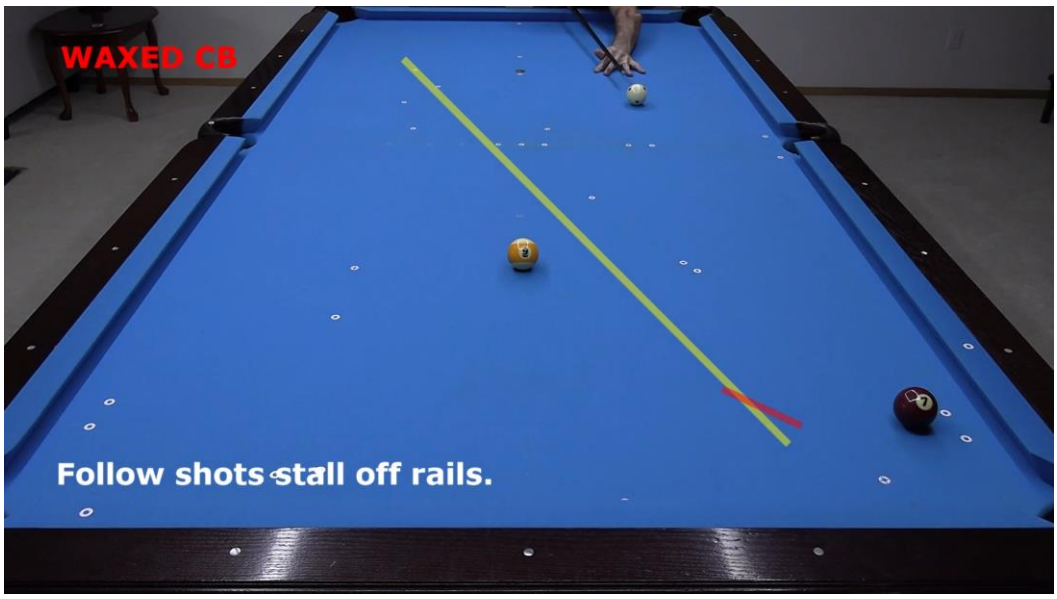

Image 3 Follow shot stall off a rail

When using sidespin under slick conditions, you must aim differently to compensate for changes in CB deflection. Remember, as shown in **Image 4**, when you hit the CB off center, in this case on the right, the CB does not go straight. It squirts off to the left and swerves back to the right some. The resulting aiming-line error at the OB is called net CB deflection. The amount of squirt depends only on the cue and the amount of sidespin. But swerve depends on many things, including the condition of the CB and cloth. To compare different conditions, I aimed the CB straight up-table from the head spot for a square hit on an OB frozen to the center of the foot rail, without compensating my aim for CB deflection. For a medium-fast shot, using my Predator Revo with maximum spin, an untreated CB deflects quite a bit, barely clipping the edge of the OB. With a CB waxed with Turtle Wax, the CB deflects more, missing the OB entirely. With Silicone Spray, the CB deflection is even larger. Obviously, if you don't know how to compensate your aim with sidespin shots, you will not be very effective using sidespin, especially if you play under a variety of conditions.

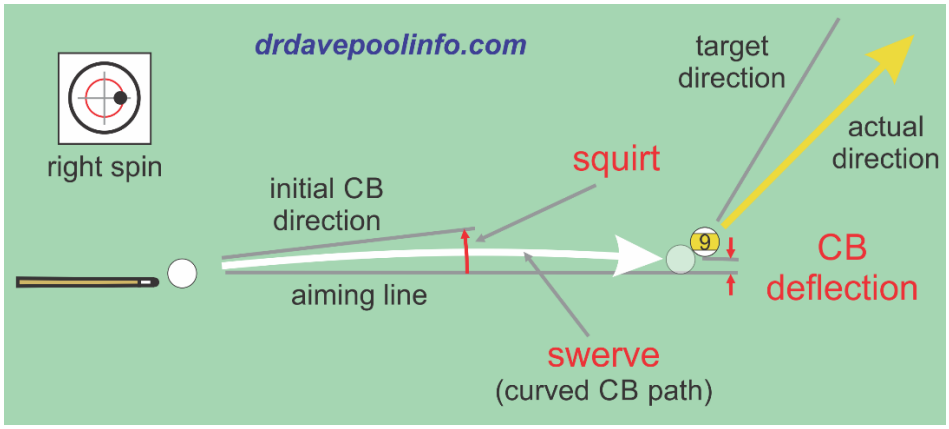

Image 4 Squirt, swerve, and CB deflection

Be sure to watch online videos **NV L.95** and **NV L.96**. They discuss and demonstrate all the effects in detail. They also discuss the whole WaxGate saga and offer recommendations for how suspicions and ball tampering can be avoided in the future. Hopefully, we won't have any more WaxGate controversies in the future to distract us from the great play the pros have been showing us lately.

Good luck with your game,
Dr. Dave


normal video

NV L.95 – Pool's WAXGATE Controversy and the Effects of Slick Cloth and Waxed Balls
NV L.96 – More Waxing Effects, Including Cue Ball Deflection

PS:

- I know other authors and I tend to use lots of terminology, and I know not all readers are totally familiar with these terms. If you ever come across a word or phrase you do not fully understand, please refer to the online glossary at ***drdavepoolinfo.com***.

Dr. Dave is a PBIA Master Instructor, Dean of the Billiard University, and author of the book: The Illustrated Principles of Pool and Billiards and numerous instructional DVD series, all available at: ***DrDaveBilliards.com****.*