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

In a previous online video ([NV F.1](#)) and in my [July '15 BD article](#), I documented the following set of experiments that can be used to objectively test and compare different brands of chalk to determine:

- 1.) the amount of cling/skid/kick caused by a chalk mark on the cue ball (CB).
- 2.) the number of sidespin shots possible with a single application of chalk before miscuing.
- 3.) the miscue limit for maximum sidespin.
- 4.) and how long chalk marks persist on the CB after multiple shots.

Since that video and article came out, I have gotten many requests to test additional chalk brands. Results for all of the chinks I have tested to date can be found under “[chalk comparison](#)” in the FAQ section at billiards.colostate.edu. So far, I have tested: Master, Master pre-flag, Lava, Blue Diamond, Kamui (0.98), Silver Cup, Magic Chalk, Predator, Great White (mako blue), and OB. Another chalk people have asked me to test recently is Taom (pronounced “Tay om”) chalk. In new online videos [NV J.7](#) and [NV J.8](#), I show simplified testing procedures that anybody can easily do on their own, and I test Taom in comparison with the other popular chinks shown in **Diagram 1**.



Diagram 1 Image from Chalk Test Video

The first test I performed was to see how many shots can be hit without chalking before a miscue results. When I applied the Taom chalk, I noticed that it seems a little more powdery and less smooth than other chinks I have tested; and it seems more difficult to get a uniform coating on the tip. Part of this could be due to color because the light tan Taom does not obscure the dark tip color as easily as standard blue chalk does. With Taom, there were 5 shots before a miscue on the first test and 6 shots before a miscue on the second. I also tested the newer “version 2” of Taom. Both tests yielded 5 hits before a miscue. Watch online video [NV J.7](#) to see the details of the test.

Then I performed a miscue limit test for Taom chalk. For this test, I hit many shots close to the expected miscue limit, chalking the tip very carefully before each shot. I used an Elephant Practice ball, which includes a black stripe and red circle to help you visualize the typical miscue limit and allow you to check the chalk mark after each shot to verify the tip contact point. As expected, the chalk mark was on the red circle with the best of the non-miscue shots. I also did the same test for version 2 of Taom and got similar results. With

these tests, I could detect no meaningful difference in performance between the original and version 2 Taom chalk.

For comparison purposes, I did the same sets of tests with Master chalk. I got 7 shots before a miscue on the first test and 6 shots on the second. The Master miscue limit test results were similar to the Taom results. Although, the best hits with Master were slightly farther from center as compared to the best Taom shots, with the Master chalk mark on the outer part of the red circle instead of the center of the red circle, but the difference was very little.

One marketing claim I have heard about Taom chalk is that it is less likely to cause cling, so I decided to test this also. Cling, also known as skid or kick, is an excessive amount of throw (more than the normal amount) caused by a chalk mark at the contact point between the CB and object ball. For more information and demonstrations, see online video [NV J.8](#) and “[cling/skid/kick](#)” in the FAQ section at [billiards.colostate.edu](#). Because Taom chalk seemed a little more difficult to apply to the tip, and it did not seem to coat the tip as thickly, maybe the chalk is also less likely to stick to the CB. If this is the case, cling might occur less frequently with Taom chalk. Unfortunately, due to its light color, it is very difficult to see how long Taom chalk persists on the CB as I was able to check with other chinks in online video [NV F.1](#).

Before reading explanations of the following tests, it would be very helpful to view online video [NV J.8](#) first. The video clearly describes and demonstrates every step of the process.

To test for cling, I first hit the CB at an angle squarely into the 1st of two frozen balls, causing the 2nd ball to throw off line. Even with perfectly clean ball surfaces, the 2nd ball throws off line. I first marked with a golf tee on the rail the direction of typical throw. Then, with my finger, I added a chalk mark to the contact point between the two frozen balls, to see how much throw increases with maximum cling. I also marked this direction with a golf tee on the rail.

Then I wanted to show that cling also occurs as a result of a chalk mark left on the CB by a normal shot. First, I chalked the tip, making sure there is very good coverage, especially in the center. Then I hit a medium-firm stop shot to create a natural chalk mark on the CB. Then I placed the CB frozen to another ball with the natural chalk mark at the contact point between the balls. For all brands of chalk that I tested, this resulted in the same amount of cling as in the previous test; although, Kamui did create a little more cling than the others.

Then I did a simple test to help determine how frequently a particular brand of chalk might lead to cling. Just as before, I first chalked the tip and hit a stop shot. I was using an Aramith Red Measles CB, aiming the tip at one of the red spots so I could easily locate the chalk mark later. Then I placed the CB with the chalk mark facing up, and hit a 3-cushion shot to the corner with top-right spin. Then I did the cling test with the original chalk mark at the frozen-ball contact point. I then repeated this procedure, increasing the number of 3-cushion shots to 2, 3, 4, and 5 before the cling tests. I measured the amount of throw on video, using an on-screen scale indicating the percentage of maximum cling relative to the normal amount of throw (both marked with golf tees earlier). Alternatively, you can have a friend look where the ball hits the cushion and measure the distance with a ruler.

Table 1 shows a summary of all of the cling-test results. Each number in the table is the percentage of maximum cling created by a chalk mark after a given number of shots. I have marked with an asterisk values that seemed a little unexpected or unusual. Obviously, we should expect some variability, partly because my cling test shot speed was not perfectly the same for every shot. Also, the chalk marks on the CB can be a little different every time, and the mark might wear off differently depending on how the CB slides and hits cushions during the pre-test shots. I tried to be as consistent as possible with CB orientation, and pre-test shot speeds and spins, but there is also variability here. On two of the tests, there was practically no cling (see the two zeros in the table). In these two cases, the chalk mark was not really visible because it somehow managed to wear off in during the pre-test shots. But in every other case, the chalk mark resulted in cling, and many times close to the maximum amount, even after several shots (see the 70s, 80s, 90s, and 100 throughout the table).

Table 1 Percentage Cling Effect of a Chalk Mark After Different Numbers of Shots

# of shots	Master	Magic	Taom	Kamui
1	90	20*	80	100
2	60*	90	80	40*
3	80	0*	40	20*
4	30	90*	50*	70
5	20	40	0*	90*

*: unexpected/unusual

After all of the chalk testing I have done over the years, my conclusions have not changed:

1.) If you chalk properly before each shot (like most good players do), it does not really matter which chalk brand you use. They all have very similar miscue limits, so the amount of sidespin you can apply is practically the same with all chalks. Now, if you want to go many shots without chalking, or if you do not chalk properly, you might prefer one of the chalks that remains effective on the tip longer, as shown by the number-of-shots-before-miscue tests.

2.) Some chalks do tend to stick to the CB more than others, so cling/skid/kick could happen more frequently with these chalks.

3.) Regardless of the type of chalk used, if a chalk mark ends up at the contact point between the CB and object ball, cling/skid/kick (in other words, a "bad hit") will occur.

Based on everything I have observed and learned, my advice is:

a.) Do not worry so much about the chalk you use. If you are miscuing, it is probably because of you, not the chalk.

b.) Make sure you chalk carefully and properly before each shot. See the end of online video [NV J.7](#) for a useful chalking advice.

c.) Clean chalk marks off the CB every chance you get (before each break and every time you have ball in hand).

Please consider using the simple tests in online videos [NV J.7](#), and [NV J.8](#) to test chalks on your own. It is not that difficult, and it does not take very long. Objective testing is better than subjective conjecture or hearsay, and it is much better than listening to marketing hype from people who sell chalk. The next time you doubt the effectiveness of your chalk, or somebody claims their chalk is better than yours, just do the simple tests demonstrated in this video to come up with an objective conclusion on your own.

Since my recent chalk testing videos have come out, there has been much online discussion via YouTube, Facebook, and the AZB online forum. Before closing, I wanted to mention a couple of topics that came up. All collisions might help shake the chalk off the CB, especially with the less "sticky" chalks. So this is something I will need to look at in any future chalk testing. Secondly, I have been known to be a little strong with my advice to avoid sticky "cosmetic grade" chalks, and the companies who sell these expensive chalks probably do not like my advice, but I think this is a big issue. If a player uses a chalk that sticks to the CB, it can not only create problems for them ... it can also create problems for their opponents with the increased risk of cling/skid/kick "bad hits." Sticky chalks might be a good idea for a player who does not chalk regularly or properly, but I think they are a bad idea for everybody else.

Good luck with your game,
Dr. Dave



[NV F.1](#) – Pool Chalk Experiment - Does the brand really make a difference?

[NV J.7](#) – Chalk Testing Follow-Up, Taom vs. Master, and How to Chalk Properly

[NV J.8](#) – Pool/Billiards/Snooker Cling/Skid/Kick Examples and Chalk Comparison

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 billiards.colostate.edu.

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