



## USBC Ball Hardness Check at U.S. Open

### Summary

As the National Governing Body for bowling, the United States Bowling Congress (USBC) is responsible for governing the rules and specifications of the sport. Recently, there has been discussion in the field concerning the hardness of some urethane balls. The USBC has done research in this area, publishing a Hardness Research Report in 2019. In 2020, USBC received additional information and conducted additional spot checks. In order to collect field data and govern the U.S. Open, USBC will take an additional step to verify urethane balls used in the event. The goal is to collect valid data related to a topic where public discussions are continuing, and to ensure all balls used in the competition meet USBC specifications. USBC will publish a report in March with results of the testing. As with all USBC research, manufacturer and player names will not be published in the report.

Below is the processes for testing the hardness of urethane balls being used during the 2020 U.S. Open.

### Overview

In order to be used in the competition, urethane balls must pass the newly established field test procedure for hardness found in the USBC Equipment Specification Manual.

### USBC Urethane Ball Check at U.S. Open Ball Hardness Check Process

#### Ball Inspection Sheet Process

1. Players obtain Urethane Ball Inspection Form from the ball table.
2. Players complete sheet providing Brand, Ball Name and Serial number.
3. USBC staff verifies information and obtains player signature.
4. Balls are taken to a secure room to be brought to appropriate temperature for testing.

**Ball Hardness Test - All balls will be tested in accordance with USBC field-test specifications for hardness. The test detail below is copied from the manual:**

*“Ball is to be tested at room temperature (70-77 degrees Fahrenheit) with a clean surface, and in compliance with ASTM 2240-15, using a certified D-type durometer with test stand.*

- 1. A ball must be acclimated to the test environment before testing (may require several hours), and the ball surface temperature should be verified with an infrared temperature gauge.*
- 2. Balls should be cleaned with isopropyl alcohol (rubbing alcohol) before testing.*
  - a. The ball must have an average hardness from 10 readings of at least 68D. The difference between the field specification and the manufacturing specification is due to variation between durometers documented by both the tool manufacturer and ASTM.*
  - b. A ball found to be outside of the field test specification could result in that individual ball being disqualified from that competition and may lead to a spot check.”*

For reference, a link to USBC Standard Operating Procedure for testing hardness of a bowling ball can be found [here](#):

#### If ball passes the hardness field test:

1. If the ball passes the hardness field test, the ball will have a mill hole drilled to show it passed.

2. The competitor will be notified by either email and/or text that his/her equipment is ready for pickup at the ball check-in table.

**If ball fails the hardness field test:**

1. If the ball fails the initial hardness field test, the USBC Senior Director of Tournament Programming shall be notified.
2. USBC Senior Director of Tournament Programming will verify the results.
3. If the ball fails the initial field test, the ball will be re-tested to confirm results.
4. The player will be notified that the ball failed the initial test and offered the opportunity to watch the re-test.
5. If the ball passes the re-test, it will be approved for the competition.
6. If the ball fails the re-test, it will be removed from competition and indefinitely confiscated by USBC for additional review.

**Balls drilled onsite:**

Urethane balls drilled on the PBA truck onsite will not require a field test. USBC has conducted spot checks of current production balls and confirmed they are within specification. Urethane balls drilled onsite must have a mill hole, or they will be deemed ineligible for competition.

**Balls without mill holes at ball check-in:**

Urethane balls presented at the check-in table for competition without mill holes will be collected for hardness check. Balls will be deemed ineligible for competition until they have been tested and approved.

**Timeframe:**

Sunday 2/16 - 8:00 AM – Table opens for acceptance of bowling equipment for testing.

Sunday 2/16 - 9:30 AM – During roll call, pre-tournament qualifier (PTQ) competitors will be notified of testing process should they advance. PTQ equipment will not be tested.

Sunday 2/16 - 8:00 PM – Table closes for the evening.

Monday 2/17 - 7:00 AM – Table re-opens for acceptance of equipment for testing.

Monday 2/17 - 9:00 PM – Table closes for the acceptance of equipment for testing.

Monday 2/18 - 7:15 AM – All ball cards are due. All testing must be complete.

March 2020 - USBC will publish a report will results of the testing.