



2020 U.S. OPEN BALL HARDNESS TESTING - PRELIMINARY REPORT

Overview/Background

- All USBC-approved bowling balls must measure at least 72D for hardness at the time of manufacture. This is the out-of-the-box specification required for USBC approval. USBC spot-checks balls against this number and the data indicates all balls start above this line.
- Test data over the last three years indicates, across the population of urethane balls, that recent releases are starting closer to the 72D specification line out of the box.
- In the 2019 Hardness Research Report, USBC stated bowling balls will measure softer immediately after use. USBC did not have data showing to what extent use over time causes urethane balls to become softer.

U.S. Open test results

- Results of the U.S. Open field test show 109 of 300 used balls tested, or about 36%, measured under 72D.
- The balls measuring under 72D included balls from multiple manufacturers and models.
- **The data indicates some urethane balls are getting progressively softer with use over time.**
- The effect is not isolated to one manufacturer and can be seen across several models.
- USBC's independent technical expert has analyzed the data and concluded the results indicate it is not a batch-to-batch variance that is causing balls to measure softer than originally approved. Instead, the technical expert says data indicates that use over time is causing some balls to progressively test softer.
- This data validates USBC's 2019 Hardness Research Report that concluded urethane balls will measure softer immediately after use. The 2020 U.S. Open data preliminary indicates that, to some extent, the effect also can be progressive over time.
- This data indicates the effect of becoming softer with use over time eventually levels out and the urethane ball's hardness stabilizes.

Balls outside specification for U.S. Open

- USBC's ball check at the U.S. Open identified two balls had fallen below the minimum 68D allowed in the U.S. Open Tournament rules.
- USBC has removed those balls from the competition, as the required per U.S. Open Tournament rules.
- Each of the balls that tested under 68D had more than two years of use.
- There is no data or evidence to indicate any player tampered with a ball, and there is no reasonable way for a player to know a ball was progressing past the hardness specification limit over time other than by regularly testing the ball through the USBC test process.

Next steps

- USBC will publish a full report with data from the U.S. Open hardness test no later than March. The report will be used by USBC to take a fresh look at the hardness standards, tests, and how best to apply to competition rules. The PBA and ball manufacturers will be invited to provide input in the process.
- In the meantime, all balls on the USBC Approved Ball List remain approved for all USBC competition unless an individual ball measures below the minimum 68D specification when tested in accordance with the field-test process in the USBC Equipment Specifications Manual.