



2021 EQUIPMENT STANDARDS MANUAL





INTRODUCTION

One of USA Pickleball's goals in growing the sport of pickleball is to ensure that equipment manufactured for the sport meets specifications and playing characteristics that reinforce the nature of the sport, provide consistent performance, and support fair competition both in the market and on the court. Working in tandem with testing labs hosted at National Testing Systems (NTS), USA Pickleball's Equipment Evaluation Committee (EEC), in place since 2016, reviews every piece of equipment submitted for testing. Over 1,000 paddles and 175 balls have been tested since its inception, providing valuable data used to validate and improve specification definition, testing process and methodologies.

This document describes the specifications to guide companies that are involved in the manufacturing or marketing of pickleball equipment who seek certification of their products for use in USA Pickleball sanctioned competition, with those passing qualification bearing the 'USA Pickleball Approved' seal.



2021 EQUIPMENT SPECIFICATIONS

The 2021 USA Pickleball Official Rules of Pickleball (the “Rules”) state that any equipment to be used in a tournament which is played according to the Rules must be named on the list of ‘USA Pickleball – Approved’ or ‘USA Pickleball Certified for Competition’ which have been tested and approved as conforming to the specifications presented in these documents. USA Pickleball Approval does not imply any other form of approval or endorsement. We strongly recommend equipment manufactured for all instances of the sport, including recreational play, meet these carefully researched specifications that ensure the integrity of the sport.



SECTION 1 - THE GAME.

See "Rules" for description. The goal of this document is to ensure the nature of the sport is preserved through ongoing management of equipment specifications and processes to measure them.



SECTION 2 – COURT AND EQUIPMENT

- 2.A. **Court Specifications.** See “Rules” for description.
- 2.B. **Lines and Areas.** See “Rules” for description.
- 2.C. **Net specifications**
 - 2.C.1 Material. The net may be made of any mesh fabric material that will not allow a ball to pass through it.
 - 2.C.2 Posts. Net posts should be 22 feet +/- 0.0 Inches (6.71 m) from the inside of one post to the inside of the other post. The maximum diameter of the net post should be 3 inches (7.62 cm).
 - 2.C.3 Size. The net length should be at least 21 feet 9 inches (6.63 m) extending from one post to the other. The net height from the bottom edge of the net to the top should be at least 30 inches.
 - 2.C.4 Edge. The top of the net should be edged with a 2- inch (5.08-cm) white tape binding over a cord or cable running through the binding. This binding must rest upon the cord or cable.
 - 2.C.5 Center Strap and Height. A center strap is recommended for permanent net and must be placed at the center of the net to enable easy adjustment to the 34-inch (86.36-cm) requirement at center. The top shall be 36 inches (91.44 cm) high at the sidelines.
 - 2.C.6 If the net drapes onto the court and such a configuration is not corrected by the tournament



staff prior to the start of play, and if the referee deems a ball is affected by the draping net, it shall result in a replay.

2.D. ***Ball Specifications.***

- 2.D.1 Construction. The ball shall be made of a durable material molded with a smooth surface and free of texturing. The ball will be one uniform color, except for identification markings. The ball may have a slight ridge at the seam, as long as it does not significantly impact the ball's flight characteristics.
- 2.D.2 Approval. The Tournament Director will choose the tournament ball. The ball selected for play in any USA Pickleball or IFP sanctioned tournament must be named on the official list of approved balls posted on the USA Pickleball and IFP websites: USAPickleball.org and ifpickleball.org.
- 2.D.3 Size. The ball shall be 2.87 inches (7.29 cm) to 2.97 inches (7.54 cm) in diameter. The maximum out-of-round diameter variance shall not be greater than +/-0.020 inch (0.51 mm).
- 2.D.4 Weight. The ball shall weigh between 0.78 and 0.935 ounces (22.1 and 26.5 grams).
- 2.D.5 Bounce. The ball shall have a bounce of 30 to 34 inches (76.2 to 86.4 cm) to the top of the ball when dropped from a height of 78 inches (198.1 cm) onto a granite surface plate that is a minimum of 12 inches (30.5 cm) by 12 inches (30.5 cm) by 4 inches (10.2 cm). The test is to be performed at an ambient temperature of 70 degrees F plus or minus 5 degrees F.



- 2.D.6 Compression. The ball, undergoing a test performed in accordance with (IAW) ASTM F1888-09, shall yield an average compression test result of <43 LBF. Each ball will be tested two (2) times, once with the load applied perpendicular to the ball seam (if applicable) and once with the load applied parallel to the ball seam (if applicable). If there are no seams then the ball will be tested once in a random location and the second location will be approximately 90-degrees from the first.
- 2.D.7 Hardness. (RECORDED FOR COROLLARY DATA ONLY, this is no longer a compliance requirement). The ball shall have a hardness of 40 to 50 on a Durometer D scale at an ambient temperature of 70 degrees F plus or minus 5 degrees F.
- 2.D.8 Design. The ball shall have a minimum of 26 to a maximum of 40 circular holes, with spacing of the holes and overall design of the ball conforming to flight characteristics. The ball must have a manufacturer's or supplier's name or logo printed or embossed on the surface, in addition to the "USA Pickleball Competition" seal or text treatment in the case of balls intended for competition, or "USA Pickleball Approved" seal for non-competition applications.



2.E. Paddle Specifications.

- 2.E.1 Material. The paddle must be made of any material deemed safe and not prohibited by these rules. The paddle shall be made of rigid, non-compressible material meeting the criteria located on the USA Pickleball and IFP websites.
- 2.E.2 Surface roughness. The paddle's hitting surface shall not contain holes, indentations, rough texturing, or any objects or features that allow a player to impart excessive spin on the ball.
 - 2.E.2.a Paddle roughness and friction characteristics are determined in two ways
 - 2.E.2.a.1 Using a Starrett SR160 Surface Roughness Tester (or equivalent). The allowable limits for roughness shall be an average of no greater than 30 micrometers (μm) on the Rz readings (average maximum height, peak to valley) and an average of no greater than 40 micrometers on the Rt readings (maximum height, peak to valley), with all readings to be taken in six different directions.
 - 2.E.2.a.2 A coefficient of friction test based on protocol (IAW) ASTM D1894-14 is used to measure the general friction characteristics regardless of surface



finishing process or technology; a paddle will pass this test with a maximum kinetic coefficient of friction value of ≤ 0.1875 . See USA Pickleball Paddle test document in Appendix.

- 2.E.2.b Reflection. The paddle's hitting surface shall not be adversely reflective, such that it has the potential to negatively affect the vision of opposing player(s). Paddles shall not have any measurement exceeding 80 GU. Measurement is to be taken at the universal measurement angle of 60 degrees with ETB-0833 Self-Calibration 20° 60° 85° Surface Gloss meter Tester 0- 200 GU or equivalent.
- 2.E.2.c Depictions. Any writing or pictures on the paddle must be in good taste.
- 2.E.3 Size. The combined length and width, including any edge guard and butt cap, shall not exceed 24 inches (60.96 cm). The paddle length cannot exceed 17 inches (43.18 cm). There is no restriction on paddle thickness.
- 2.E.4 Weight. There is no restriction on paddle weight.
- 2.E.5 Alterations. Altered paddles must meet all specifications.



- 2.E.5.a The only alterations or additions that may be made to a commercially made paddle are edge guard tape, lead tape, changes to the grip size or grip wrap, and name decals and/or other identification markings on the paddle face.
- 2.E.5.b Decals and tape can extend no farther than 1.0 inch (2.54 cm) above the top of the grip nor more than 0.5 inch (1.27 cm) inside the outer edge of a paddle or, if an edge guard is in place, 0.5 inch inside the edge guard.
- 2.E.5.c Handwritten markings are allowed on the paddle's playing surface as long as they do not impact the surface roughness and are in good taste. No aftermarket graphics are allowed on a commercially made paddle other than "handwritten" pen markings.
- 2.E.6 Prohibited Surface Features and Mechanical Features.
 - 2.E.6.a Anti-skid paint or any paint textured with sand, rubber or vinyl compounds or any material that causes additional spin.
 - 2.E.6.b Rubber and synthetic rubber.
 - 2.E.6.c Sandpaper characteristics.
 - 2.E.6.d Moving parts that can increase head momentum with a proven increase in force.



- 2.E.6.e Removable parts. No removable parts except for paddle grip adjustments and/or grip wraps and lead tape on the paddle edge.
- 2.E.6.f Springs or spring-like material, flexible membranes or any compressible material that creates a trampoline effect.
- 2.E.6.g Electrical, electronic, or mechanical assistance of any sort.

2.E.7 Model Designation. The manufacturer must have a clearly marked brand and model name or model number on the paddle, and must also include the 'USA Pickleball Competition' seal or text treatment. Paddles with different core material, surface material, or other significant differences must have a unique name or number. The brand and model information may be shown on the paddle by a manufacturer affixed decal. This decal can extend no farther than 1.0 inch (2.54 cm) above the top of the grip nor more than 0.5 inch (1.27 cm) inside the outer edge of a paddle or, if an edge guard is in place, 0.5 inch inside the edge guard.

2.F. ***Equipment Approval and Authorization.***

The approval of equipment authorized for sanctioned tournament play shall be made by the USA Pickleball Board of Directors acting on a recommendation of the Equipment Evaluation Committee (EEC).

- 2.F.1 Approval and authorization of a specified piece, model, brand, version, design, or type of equipment may be revoked by the Board of Directors upon 18 months' notice on the USA Pickleball



and IFP website home pages, official national newsletter publications, or other acceptable means of communication, if the specified equipment is found to have been materially changed by the manufacturer or if the equipment materially degrades or changes under ordinary use so as to significantly alter the nature of the sport.

2.F.2 Manufacturers are subject to compliance testing to ensure that products as produced and sold are compliant with all requirements. The lists of approved equipment may be posted on the USA Pickleball and IFP websites: USAPickleball.org and ifpickleball.com.

2.F.3 USA Pickleball/IFP Approved Paddle List – Players are responsible for confirming that the paddle they are using for match play is listed as Pass on the USA Pickleball/IFP Approved Paddle List. The lists of approved equipment may be posted on the USA Pickleball and IFP websites: USAPickleball.org and ifpickleball.com.

2.F.3.a Violation. If at any point during the tournament it is determined that a player is using a paddle that violates any of the paddle specifications or is not listed on the USA Pickleball/IFP Approved Paddle List as Pass, the following penalties apply:

2.F.3.a.1 If the violation is identified prior to the match starting, the player may switch to a paddle listed as Pass on the USA Pickleball/IFP Approved Paddle List without penalty.



- 2.F.3.a.2 If the violation is identified after the match has started, the player or team forfeits only the match being played.
- 2.F.3.a.3 If the violation is discovered after the match has concluded, the match results stand.

Note: The USA Pickleball reviews equipment testing standards periodically and, with proper notification to manufacturers, reserves the right to modify equipment specifications as needed to maintain the integrity of the game.