

Paddle Material Specifications

Revised February 27, 2013

Introduction

As the organization that sets the uniform standards for international pickleball, the International Federation of Pickleball (IFP) has the task of judging whether innovations in pickleball equipment may bring about a benefit to those who play, or whether such developments constitute a threat to the nature of the game.

In deciding any matter related to equipment, the IFP is required to interpret the Rules in a manner which will preserve the traditional nature and character of the game and preserve the skills traditionally required to play the game.

Traditionally, paddles have been made from relatively rigid, non-compressible material. That is the traditional concept of a paddle and that is why the game is not played with a stringed racquet. Paddles that produce a trampoline effect or an effect similar to a stringed racquet are specifically disallowed.

The following test is one measure of rigidity and compressibility of the paddle. See paragraph 2.E of the IFP Rules for additional specifications.

Deflection Test for Rigidity and Compressibility.



The test stand at the left is used to measure deflection of the paddle surface when a known weight is applied. The paddle is supported on blocks five inches in length, separated by 5.5 inches measured at the interior surfaces.

A dial indicator measures the deflection in thousandths of an inch.



The photo at the left shows a paddle mounted on the test stand. A known downward weight is applied to the center of the paddle with a one-half inch steel rod.

Test Results

In May 2009, the above test was performed on most commercial paddles available at the time. With a force of 3 kg (6.6 lb) applied to the center of the paddle, deflection for all paddles measured within the range of 1 to 4 thousandths of an inch except for one paddle that measured 26 thousandths of an inch. Complete test results at weights of 3 kg and 5 kg are in a table below.

Conclusion

When subjected to the above tests, all traditional paddles have a deflection of 4 thousandths of an inch or less at a test weight of 3 kg. Paddles which have a deflection greater than 5 thousandths of an inch at a test weight of 3 kg may produce a trampoline effect and shall be subject to further testing or placed on a list of paddles that do not meet specifications. (revised 1-28-12).

Additional tests may be required in the future as paddle manufacturers introduce concepts that vary from the concept of a traditional paddle. The IFP may add to this test to preserve the concept of a traditional paddle and to preserve the playing characteristics and integrity of the sport.

Update Nov. 26, 2012: The table below lists paddles that have been tested for deflection. In addition, a notation is made if a paddle does not comply with the paddle specifications in paragraph 2E of the official IFP rules. Manufacturers and retailers are not authorized to say “approved by” USAPA or IFP. They can say that they comply with the paddle specifications of the IFP. Approval would imply an endorsement for safety and reliability that are not within the scope of the testing.

Complete Table of Test Results, May 2009 and Dates Below

Description	Deflection (.001 inch)	
	3 Kg (6.6 lb)	5 Kg (11.0 lb)
Coach Mo		
The Sweet Spot (9-12-12)	0.5	1.0
The Sweet Spot Lite (9-12-12)	1.5	2.0

Frank Wu		
Apike Paddle Does not comply with the specification.	26	37
Hush! Paddle (Oct. 27, 2010) Samples	2	4
Hush! Paddle (Dec. 26, 2010) Does not comply	19	27
Note: Samples with a hard fiberglass surface were provided for testing. The production version tested Dec. 26, 2010 has a softer, flexible surface similar to the Apike.		
Edgeless (2-27-12) Coated with fiberglass, very reflective.	2	3
Update 11-16-12: Edgeless with matte finish. Manufacturer has not provided a paddle for testing. Update 12-8-12. Test of a player's paddle fails with measurements way out of acceptable limits.	4.5 21	9 34
Dot Pickle Ball		
Crush (5-19-12)	0.5	1
Laser Sport Products		
1402 (11-1-12)	4.5	5.5
1403 (11-1-12)	2	2.5
1404 (11-1-12)	3.5	5
Manta World Sport		
Prototypes tested May 2012.	3	5
Snow Bird Pro & Manta Pro Team 12-8-12.	4.5	7
PAC Pickleball Paddles		
XP100 (2-27-12)	4	5
XP200	5	8
XP300	4	7
XP400	4	9
XP300HA (11-24-12) Manufacturer states that XP100HA, XP200HA, and XP400HA are all made of the same material, but differ in shape.	1	1
XP300HF (10-20-12) Manufacturer states that XP100HF, XP200HF, and XP300HF are made from the same material, but differ in shape.	1	2
XP300HP (11-24-12) Manufacturer states that XP100HP, XP200HP, and XP300HP are made from the same material, but differ in shape.	2.5	5
PaddleBoardZ		
Raider EQ7-99 (2-11-13)	2	2.5
Prowler EQ8-96 (2-11-13)	2	2.5
Avenger EQ9-88 (2-11-13)	2	2.5
paddletek		
Sweet Spot R1/R2 Thick (Sept. 3, 2012)	4	6
Sweet Spot R1/R2 Thin (Sept. 3, 2012)	3.5	5
Sweet Spot R3 (8-26-12)	4	8.5
Ultra Sweet Spot (8-26-12)	3	5

Ultra Warp 9 (8-26-12)	2.5	4
Warp 9 R1/R2 Thick (Sept. 3, 2012)	2.5	4.5
Warp 9 R1/R2 Thin (Sept. 3, 2012)	3	3.5
Warp 9 R3 (8-26-12)	3	4.5
Performance One Paddles (POP)		
Model Q1. (March 14, 2011) This model is made in various thicknesses and weights, hence the range of measurements. 10-23-11. Does not comply with the specification. The above results apply to the first paddles that were submitted for testing. Recent production models have not been within spec, measuring .007-.008 @3Kg. The same test results were obtained on models with aluminum skin and models with graphite skin.	3.5-5.5	6-8
AMHC (aluminum magnum - honeycomb core) (model name corrected 10-24-12, was listed as ALHC) ATHC (aluminum-tear-honeycomb) 3-3-12 oversized at 16 x 8 3/16. Update 9-12-12: manufacturer states only 3 paddles made at this size. Revised model listed below passes all tests.	2	3.5
ATHC (aluminum-tear-honeycomb) (9-12-12)	0.5	1.0
GMHC (graphite magnum honeycomb core)	3	4
4.0 Touch (9-12-12)	3.5	8.5
5.0 Dual Core Touch (9-12-12)	2.0	3.5
5.0 XL Touch (2-27-13)	2.5	3.0
7.5 Dual Core Touch (9-12-12)	1.0	2.0
AXL HC (aluminum xtra long honeycomb) (9-12-12)	1.0	2.0
E-Glass/HC (9-12-12)	2.0	4.5
Graphite Trigger	1.5	3.0
Pickle-Ball Inc.		
Swinger Wood Paddle	2	5
Diller Wood Paddle	4	6
Master Wood Paddle	2	3
Pro-II Wood Paddle	2	4
Attack Graphite-Aluminum (11-1-12)	1.5	2
Elite Model Regular Size Graphite Paddle	1	2
Elite Graphite-Aluminum (11-1-12)	1	1.5
Elite Graphite-New Paper Core (11-1-12)	2	3.5
Champion Graphite-Nomex (11-1-12)	1.5	2
Champion Fiberglass-Aluminum (11-1-12)	1.5	2.5
Legacy Graphite-Paper (11-1-12)	1.5	2.5
Revolution	1.5	3
Pickleball Central		
Classic Graphite (Oct. 23, 2011)	2.5	3.5

Pickleball Now		
Classic Force (2-27-12)	1.5	3
Classic Lite (May 2011) (2-27-12)	3.5	5.5 (2.5)
MetaLite Classic (May 2011) (2-27-12)	(1.5)	2
MetaLite Force (2-27-12)	1.5	2
MetaLite Stretch (May 2011)	1	5
MetaLite Whisper (May 2011)	3	2
Precision Pro (Sept. 2010)	1	5.5
Tournament Pro (Sept. 2010)	3.5	3
XL Lite (May 2011) (2-27-12)	1.5	3.5
Whomper (May 2011) (2-27-12)	2	2
Update 10-23-11. Some Pickleball Now paddles measured at tournaments have been slightly oversize. Paddles that may be oversize include Whomper, Stretch Lite, MetaLite Stretch, XL lite, and MetaLite Whisper. Manufacturer states that current production has a flush edge guard instead of overlapping and complies with the size specification.	1	
Update 2-27-12 New paddles with the date shown were tested and meet the specifications.		
PickleballPaddlesPlus		
Nexus Alloy (11-15-12)	1.5	2
Nexus Carbon-Graphite (10-20-12)	1	1.5
PicklePaddle		
R1	3.5	5.5
T200 (8-11-12)	4.5	7.0
W400 (8-11-12)	4.5	7.5
PicklePaulPro		
OV1SK1FIAL (thin) (10-20-12)	2.5	3
OV1SK2FIAL (thick) (10-20-12)	2	3
Pro-Lite Sports		
Pro-Lite Classic Composite Paddle	1	2
Pro-Lite Composite Aero-D Paddle	1	3
Pro-Lite Composite Magnum Size Paddle	1	4
Pro-Lite Power Paddle	1	2
Pro-Lite Graphite Aero-D Paddle	1	2
Pro-Lite Graphite Magnum Size Paddle	1	2
Pro-Lite Graphite Enforcer Paddle	1	2
Pro-Lite Graphite Blaster (Sept. 2010)	2	3
Pro-Lite Graphite Impact (10-20-12)	0.5	1.0

Onix Sports (formerly S-Type Sports)		
Composite Slammer Paddle	3	4
Composite Stryker Paddle	1	3
Composite Stinger Paddle	1	2
Composite Extreme Paddle	1	2
Composite Storm Paddle	1	3
Composite Z5 (Dec. 5, 2011)	1	2
Graphite Slammer Paddle	1	3
Graphite Stryker Paddle	1	2
Graphite Extreme Paddle	1	2
Graphite Storm Paddle	1	2
Graphite Z5 (Dec. 5, 2011)	1	1.5
Core-2 (11-1-12)	2	3.5
Core-2 Graphite (11-1-12)	1.5	2.5
Onix Sports Wood (11-1-12)	4.5	7.5
Signature (2-11-13)	4.5	8
Singleton		
Big Boy (Sept. 3, 2012)	1.5	3
Lightning (Sept. 3, 2012)	1	1.5
T-Bolt (10-20-12)	0.5	0.5
Spike's Paddles (ZZT Sports)		
Aluminum Core	1	2
Aluminum Core w vinyl face	1	2
EV II Aluminum Core (Jan. 28, 2012)	1	2
Prototype with Aluminum Core	1	2
Whippersnapper	2	4