

adidas	Standard FTW	Document No PHP-FW0766 (aka FGT-66)	Version 4.0	Page: 1 / 7
				Approval Date: 16/05/2025
Quality: Durability, External Compliance	Sandal/Slide Flex Test			Effective Date: 26/05/2025
				Effective Until Further Notice

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Departments Affected: Suppliers, 3 rd party labs, Development and Sourcing Teams			
Version	Date	Modifications	Page
1.0	03/2011	New procedure written for sandal flexing	All
2.0	04/2018	Added conditioning for PU and PU hybrid material	All
3.0	02/2022	Added exception for bottom unit thicknesses New structure and format	All
4.0	05/2025	Implement CMA flexing as mandatory adidas standard and Weinmann flexing only for -10°C conditions	All
Remarks:			

1 Purpose

To determine the durability of materials and assembly process of sandals during long term flexing.

2 Scope

Valid for:

- sandals/slides from all categories,
- Kid shoes with a size < 3 UK,

except the thickness at the flexing area of the sandal/slide is more than 25 mm (package of outsole (without cleat, studs, spikes) + midsole + insole + sockliner)

NOTE: height determination according to the FGT-02 annex!

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3 Roles & Responsibilities

User Group	Responsibilities	Section	Detail	Link
Suppliers/ 3 rd party labs	Test Execution and Evaluation	Entire file	Required Equipment; Sample Preparation and Conditioning; Test Execution; Data Collection, Evaluation and Reporting.	5 ff.
Quality Teams; Material Teams; Operation Teams	Ensure Standard is executed			

4 Reference Documents/Terminology

- ISO 24266 Method A: Test methods for whole shoe – Flexing durability
- GB/T 3903.1 – 2017: CMA flex test machine and definitions
- [PHP-FW0700 \(FGT-00\): Conditioning \(temperature and humidity\)](#)
- [PHP-FW0702 \(FGT-02\): Shoe Flex Test – as reference](#)

5 Specific Procedure

5.1 Equipment

- The flexing angle can be set to 45°
- The flexing frequency can be set to 140 times per minute.
- Flexing machine has a stamp which is holding shoe in the forefoot area (see Figure 1).
- Machine may be sourced from various local suppliers.
- Machine should be able to stop automatically after the specified flexing cycles are reached.

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Figure 1: Sandals/Slides flexing machine

5.2 Sample

- 1 pair of sandals/slides
- Sample should be produced at least 24h before testing
- Conditioning according to [PHP-FW0700](#) for at least 4h – recommended 24h

5.3 Procedure

1. Place sandal/slide on machine and secure it with the clamping device (Figure 2).



Figure 2: Clamp sandal/slide in the forefoot.

2. Secure heel/back of sandal/slide to flexing arm (Figure 3 left and right).

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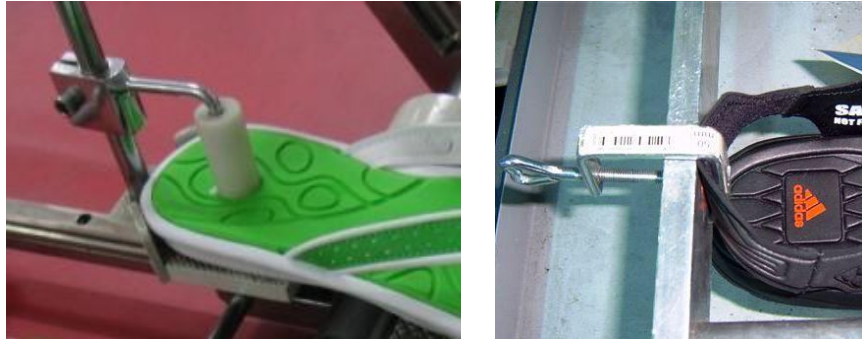


Figure 3: Backside clamping

3. Set counter on control panel for required number of cycles.
4. Set speed controller so that machine runs at **140** cycles/minute.
5. Ensure that flexing angle is **45°**
6. Run the test. Machine will stop when test is finished.

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5.4 Data Collection, Evaluation and Reporting

- Failing, if the outsole, footbed or bandages show any delamination ≥ 5 mm, cracking of material ≥ 5 mm, more than 3 areas breaking, or any other damage.
- Defects caused by clamping are out of scope of the evaluation (e.g. stamp area)
- If one sandal/slide of a tested pair passes and one fails, repeat the test until you have two identical results/trends.
- Perform an intermediate check at 50.000 cycles Note the intermediate check result in aTP if the test is failing between intermediate and final check level. If test is failed before intermediate check level, mention 49.999 cycles or any other previous checkpoint.



Figure 4: Failure examples of delamination and outsole cracking

Requirements:

All sandals must be tested according to the requirement listed in aTP:

	Test s e t t i n g	Requirement

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	n g s	
All kinds of sandals/slides	140 cycles/min 45° f l e x a n g l e	55.000 cycles

Note: All listed requirements are minimum requirements!

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6 **Further Information**

	In all cases, the instruction manual according to the manufacturer including calibration and maintenance must be followed to ensure safety and quality.
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7 **Appendix**

No appendix present!

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