

ICS 83.180



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 7122-2025

**Determination of peel resistance of high-strength adhesive
bonds - Floating-roller method
(English Translation)**

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Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 Directives for

standardization - Part 1.Rules for the structure and drafting of standardizing documents.

This document serves as a replacement of GB/T 7122-1996 Adhesives - Determination of peel

resistance of high-strength adhesive bonds - Floating roller method. In comparison with GB/T

7122-1996, apart from structural adjustments and editorial modifications, the main technical changes are as follows.

--- The "Scope" has been changed (see Clause 1; Clause 1 of the 1996 Edition);

--- The normative reference GB/T 2943 has been added (see Clause 3; Clause 3 of the 1996

Edition);

--- The "Principle" has been added (see Clause 4);

--- The requirements for equipment precision and roller shaft diameter in the "Apparatus" have been changed (see 5.1, 5.2; 4.1, 4.2 of the 1996 Edition);

--- The applicable standards for surface treatment in the "Specimen" and the requirements for measuring adhesive layer thickness, specimen pre-test aging conditions, and specimen dimension measurement have been added; and the preferred width dimension of the specimen has been changed (see 6.2, 6.4, 6.7, 6.8, 6.9; 5.2 and 5.4 of the 1996 Edition);

--- The information on specimen conditioning in the "Atmospheres for Conditioning and Testing" has been added (see Clause 7);

--- A method for representing failure types in the "Test Procedures" has been added (see 8.3);

--- The method d) in the "Test Result Processing" has been added (see Clause 9);

--- The aging conditions in the "Test Report" have been added, and the description of specimen failure types has been changed (see Clause 10; Clause 9 of the 1996 Edition).

This document was adopted with modifications from ISO 4578.1997 Adhesives - Determination

of peel resistance of high-strength adhesive bonds - Floating-roller method.

Compared with ISO 4578.1997, this document features some structural adjustments. A table

showing the correspondence between the two documents regarding changes in structural numbering is provided in Appendix A.

Compared with ISO 4578.1997, this document contains numerous technical differences, which

are indicated by a vertical single line (|) in the margin adjacent to the relevant clauses. An overview of these technical differences and the causes therefor is provided in Appendix B.

Determination of Peel Resistance of High-Strength Adhesive

Bonds - Floating-Roller Method

1 Scope

This document describes a method for determining the peel resistance of high-strength adhesive

joints using the floating-roller method.

This document is applicable to the determination of the peel resistance of adhesive bonds between rigid and flexible adherends.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a

specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 2918 Plastics - Standard atmospheres for conditioning and testing (GB/T 2918-2018, ISO

291.2008, MOD)

GB/T 2943 Terms of adhesives

GB/T 16997 Adhesives - Designation of main failure patterns (GB/T 16997-2025, ISO 10365.2022, IDT)

GB/T 21526 Structural adhesives - Directives for the surface preparation of metals and plastics

prior to adhesive bonding (GB/T 21526-2025, ISO 17212.2012, MOD)

GB/T 35489 Guide to the selection of ageing conditions for adhesives (GB/T 35489-2017, ISO

9142.2003, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 2943 and the following ones are applicable to this document.

3.1 Peel Resistance

The average force required per unit width of the specimen when two adherend specimens are

gradually separated along the adhesive line under specified test conditions.

4 Principle

Using the specified test apparatus, the flexible adherend is peeled from the rigid adherend, and

the force required to peel the flexible adherend is measured.

5.1 Tensile Testing Apparatus

The tensile testing apparatus shall be equipped with an effective measurement system and an

indication and recording system, with force values accurate to $\pm 1\%$. The apparatus shall be equipped with a suitable self-calibrating gripper that can securely clamp 25 mm from the outer

end of the flexible adherend. The gripper and peel test fixture shall be able to move and align

simultaneously with the specimen under force, ensuring that the direction of the flexible adherend in the specimen is aligned with the tensile force applied through the centerline of the

peel fixture apparatus. All apparatus shall be calibrated periodically; a non-inertia tensile testing

apparatus is recommended for this test.

5.2 Peel Test Fixture

The peel test fixture supporting the specimen is shown in Figure 1. The upper end of the fixture

is connected to the gripper on the testing machine. The diameter of the roller shaft on the peel

test fixture is (25.0 ± 0.5) mm. Both ends of the roller shaft shall be composed of bearings and

be able to rotate freely.

Unit. mm

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