

Australian/New Zealand Standard™

**Methods of test for pulp and paper**

**Method 430s: Liner adhesion of  
corrugated board**



## **AS/NZS 1301.430s:2004**

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The following are represented on Committee PK-019:

Appita Inc.  
Australian Paper Industry Council  
CSIRO Forestry and Forest Products  
Forest Research (New Zealand)  
National Association of Forest Industries  
New Zealand Pulp and Paper Industry Association

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# Australian/New Zealand Standard™

## Methods of test for pulp and paper

### Method 430s: Liner adhesion of corrugated board

Originated as AS P1.430—1962.  
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## Preface

This Standard was prepared by Joint Technical Committee PK-019, Methods of Test for Pulp and Paper, as part of AS/NZS 1301, *Methods of test for pulp and paper*.

There is no corresponding ISO Standard. FECFCO method No.11 is a related method (see also Reference [2]).

This edition cancels and replaces AS 1301.430s—1989.

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NOTES

# Liner adhesion of corrugated board

## 1 Scope

This standard sets out a method to determine the liner adhesion of corrugated board.

## 2 Normative references

The following documents are referred to in this Standard.

AS

1301.414m Conditioning of paper for testing

AS/NZS

1301.449s Description of crush testing equipment

1301.415s Standard atmosphere for testing paper and board and procedure for monitoring the atmosphere

## 3 Definition

For the purpose of this standard the definition below applies.

**3.1 Liner adhesion of a corrugated board**, is the minimum load necessary to cause complete separation of one of the liner plies from the corrugated medium of the board when tested under the prescribed conditions. It is used as a measure of the tendency of the glue line to fail when under stress. The load is expressed in kilonewtons per metre of glue line.

**3.2 Glue line**, is the line of glue that is applied along the crests of the corrugations of the medium by means of which the medium is attached to the liner. The term **failure within the glue line** is taken to mean cohesive failure within the glue material itself, or adhesive failure between the glue and the liner, or adhesive failure between the glue and the medium but not failure within the liner adjacent to the line of glue or elsewhere.

## 4 Apparatus

**4.1 Motor driven crush testing machine**, as described in AS/NZS 1301.449s.

NOTE 1 — Emery cloth on the platens is not necessary for this test, but because it is necessary for some other tests it may be present. The emery cloth must be replaced as soon as any defect is observed.

**4.2 Test piece holder**, consisting of two sets of prongs.

NOTE 2 — In order to ensure symmetrical application of load, it is necessary for one set of prongs to have one prong more than the other. Consequently glue lines other than those to be tested must be cut through to ensure that the full load is carried by the intended number of flutes. The intended number of flutes is:

For A-flute — 5, for B-flute — 13 and for C-flute — 6.

The prongs should be sufficiently rigid that the least possible amount of bending occurs under load, and for this reason the prong length should not be more than is required to comfortably hold the test piece. One set is mounted in a frame which constitutes the base of the holder, and supports the upper liner of the test piece. The other set is supported entirely by the lower liner of the test piece and is fitted to a frame which can accept load from the upper platen of the compression tester. When assembled and under load the platens through each of the sets of prongs are subject to the same requirements of parallelism as the platen surfaces of the compression tester (see AS/NZS 1301.449s). Differently dimensioned test piece holders are required for each type of flute (i.e. A-, B- or C- flute), and within each type of flute several slightly different prong spacings are required to accommodate variations in the number of flutes per metre. The prong spacings should be such that each