

---

---

**Recycled pulps — Estimation of Stickies  
and Plastics —**

**Part 2:  
Image analysis method**

*Pâtes recyclées — Estimation des matières collantes et des matières  
plastiques —*

*Partie 2: Méthode par analyse d'image*



**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS

© ISO 2001

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.ch](mailto:copyright@iso.ch)  
Web [www.iso.ch](http://www.iso.ch)

Printed in Switzerland

## Contents

	Page
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 Principle .....	2
5 Apparatus and equipment .....	2
6 Reagents .....	3
7 Sampling .....	4
8 Adjustment and calibration of the image analysis system .....	4
9 Pretreatment of the sample .....	4
10 Procedure .....	5
11 Calculations .....	7
12 Precision .....	8
13 Test report .....	9

## Annexes

A Laboratory screening equipment .....	10
B Comparison chart .....	12
Bibliography.....	14

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 15360 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 15360-2 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*, Subcommittee SC 5, *Test methods and quality specifications for pulps*.

ISO 15360 consists of the following parts, under the general title *Recycled pulps — Estimation of Stickies and Plastics*:

- *Part 1: Visual method*
- *Part 2: Image analysis method*

Annexes A and B form a normative part of this part of ISO 15360.

## Introduction

This part of ISO 15360 is complementary to ISO 15360-1, which concerns estimation of Stickies and Plastics in recycled pulp by visual examination. ISO 15360-2 is particularly useful for pulps having a high content of Stickies or Plastics or both where visual inspection is very time-consuming to carry out.

Two alternatives are given for the estimation of Stickies, while there is only one procedure for the estimation of Plastics.

This document is a preview generated by EVS

This document is a preview generated by EVS

# Recycled pulps — Estimation of Stickies and Plastics —

## Part 2: Image analysis method

### 1 Scope

This part of ISO 15360 specifies a method to estimate Stickies and Plastics in all grades of recycled pulp. It applies the principles for the separation of Stickies and Plastics described in ISO 15360-1. The visualization and counting techniques described in that standard are replaced here by image analysis.

This part of ISO 15360 permits the use of different laboratory screening devices as well as screens of different sizes when applying the specified method. It is impracticable to define more closely the equipment or screen sizes to be used, because of the wide range of Stickies and Plastics found in recycled pulps, and the various screening devices which are being successfully used for their measurement.

**NOTE** This method will only estimate those Stickies and Plastics which are tacky and which are retained on the screen of a given slit size under the temperature and pressure conditions of this test method. It should be noted that this will probably not be the total amount of Stickies and Plastics that are actually present in a given pulp sample.

### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 15360. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 15360 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 638, *Pulps — Determination of dry matter content*

ISO 4119, *Pulps — Determination of stock concentration*

ISO 5263, *Pulps — Laboratory wet disintegration*

ISO 5269-2, *Pulps — Preparation of laboratory sheets for physical testing — Part 2: Rapid-Köthen method*

ISO 7213, *Pulps — Sampling for testing*

ISO 8486-1, *Bonded abrasives — Determination and designation of grain size distribution — Part 1: Macrogrits F4 to F220*

DIN 54516:1985, *Testing of paper and board — Determination of plybond resistance*

TAPPI T 541 om-89, *Internal bond strength of paperboard (z-direction tensile)*

### 3 Terms and definitions

For the purposes of this part of ISO 15360, the following terms and definitions apply.