
**Coal — Methods for evaluating flocculants
for use in coal preparation —**

**Part 1:
Basic parameters**

*Charbon — Méthodes d'évaluation des flocculants utilisés dans la
préparation des charbons —*

Partie 1: Paramètres de base



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 2000

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 22 734 10 79
E-mail copyright@iso.ch
Web www.iso.ch

Printed in Switzerland

Contents

	Page
1 Scope	1
2 Normative references	1
3 Principle	1
4 Apparatus	1
5 Materials	2
6 Sampling	3
7 Preparation of flocculant solutions	3
8 Procedure	4
9 Calculation of results	5
10 Recording of results	6
11 Repeatability	6
12 Test report	6

Annexes

A Worked example	8
B Data recording sheets	11
B.1 Free-settling rate	11
B.2 Full settling curve	12

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 10086 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 10086-1 was prepared by Technical Committee ISO/TC 27, *Solid mineral fuels*, Subcommittee SC 1, *Coal preparation: Terminology and performance*.

ISO 10086 consists of the following parts, under the general title *Coal — Methods for evaluating flocculants for use in coal preparation*:

- *Part 1: Basic parameters*
- *Part 2: Flocculants as filter aids in vacuum filtration*

Annexes A and B of this part of ISO 10086 are for information only.

Coal — Methods for evaluating flocculants for use in coal preparation —

Part 1: Basic parameters

1 Scope

This part of ISO 10086 specifies a method for the comparative evaluation of the performances of flocculants for clarification, thickening and sedimentation applications on a given slurry. This performance can be evaluated by

- a) the settling velocity in the initial period,
- b) the sediment volume after compaction and consolidation,
- c) the clarity of the supernatant liquid.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 10086. 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 10086 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 1171, *Solid mineral fuels — Determination of ash*.

ISO 1953, *Hard coal — Size analysis by sieving*.

3 Principle

The performance of different flocculants on a given slurry is determined by measuring the relative settling rates.

A flocculant solution is added to an aliquot of the slurry in a measuring cylinder and the formation of an interface between the supernatant liquid and the suspension is observed. An initial settling rate is calculated and is plotted against flocculant dosage to evaluate the performance of the flocculant.

4 Apparatus

Usual laboratory apparatus, and

4.1 Stirrers, two variable-speed motorized stirrers capable of 1 000 r/min (one for flocculant preparation and one for sample homogenization).

4.2 Plastic moulded cylinders, of capacity 500 ml, graduated in 5 ml scale divisions and having rubber stoppers. Where these are not available, glass cylinders, of capacity 500 ml \pm 2 ml, graduated in 5 ml scale divisions and having ground-glass stoppers, may be a satisfactory alternative. However, differences in settling rates may result, because of differences in the graduated height.