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Edition 1 and nat. amdt 1

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Any reference to SABS ISO 8264 is deemed
to be a reference to this standard
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SOUTH AFRICAN NATIONAL STANDARD

Hard coal — Determination of the swelling properties using a dilatometer

This national standard is the identical implementation of ISO 8264:1989, and is adopted with the permission of the International Organization for Standardization.

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Table of changes

Change No.	Date	Scope
Nat. amdt 1	2007	Amended to change the designation from SABS to SANS, with no technical changes.

National foreword

This South African standard was approved by National Committee SABS/TC 027/SC 05, *Solid mineral fuels – Coal – Methods of analysis*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

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This document will be reviewed every five years
and be reaffirmed, amended, revised or withdrawn.**

INTERNATIONAL STANDARD

**ISO
8264**

First edition
1989-11-15

Hard coal — Determination of the swelling properties using a dilatometer

Houille — Détermination des propriétés de gonflement à l'aide d'un dilatomètre



Reference number
ISO 8264 : 1989 (E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8264 was prepared by Technical Committee ISO/TC 27, *Solid mineral fuels*.

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Introduction

The Audibert-Arnu dilatometer test was adopted as ISO Recommendation ISO/R 349 : 1963 which was transformed into an International Standard ISO 349 : 1975. When reviewed in 1980, it was generally acknowledged that similar tests, using slightly different equipment and techniques, were used in various countries. One test in widespread use was that which measures the swelling properties of hard coal using the Ruhr dilatometer.

A thorough survey of the construction and operation of this instrument was made between 1973 and 1978 by a working group in the United Kingdom. Eleven laboratories participated in the work, including two which operated the Audibert-Arnu dilatometer as described in ISO 349. In the course of considerable inter-laboratory testing, the results indicated that values of contraction and dilatation found with the Audibert-Arnu dilatometer were higher and lower respectively than those found with the modified Ruhr dilatometer (the version described in this International Standard).

These differences were attributed to the fact that the excess material from the tapered test piece is removed from the wider end in the Audibert version of the dilatometer test and from the narrower end in the Ruhr version. The latter procedure ensures a test piece of greater and more uniform volume.

It is not intended that ISO 349 be withdrawn immediately, however it is suggested that the test be gradually phased out and replaced by that described in this International Standard, a test which has been tried and proven, particularly in the United Kingdom and the Federal Republic of Germany, and shown to be reliable and suitable for measuring the swelling properties of all types of hard coal.