

BS ISO 5074:2015



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Hard coal — Determination of Hardgrove grindability index

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National foreword

This British Standard is the UK implementation of ISO 5074:2015. It supersedes BS 1016-112:1995 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PTI/16, Solid mineral fuels.

A list of organizations represented on this committee can be obtained on request to its secretary.

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**Hard coal — Determination of
Hardgrove grindability index**

Houille — Détermination de l'indice de broyabilité Hardgrove



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Foreword

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 27, *Solid mineral fuels*, Subcommittee SC 5, *Methods of analysis*.

This third edition cancels and replaces the second edition (ISO 5074:1994), which has been technically revised.

Introduction

The Hardgrove grindability test and test machinery are designed and developed to characterize the relative grindability of coals. The Hardgrove grindability index represents a composite physico-mechanical property of the coal, embracing a number of specific properties such as hardness, strength, tenacity and fracture, and is a function primarily of coal rank and secondarily of coal type. Two of the important variables that can influence the result of this determination are the method of sample preparation, which involves selective grinding of the coal, and the moisture content of the coal. The Hardgrove grindability index is used empirically to estimate the capacity and power consumption of a pulverizer, given a specified product fineness.

Hard coal — Determination of Hardgrove grindability index

1 Scope

This International Standard specifies the method for determining the grindability index of hard coal using the Hardgrove machine. It also specifies the procedure for calibrating the test machine and for preparing the standard reference coal samples.

NOTE In this International Standard, the term “hard coal” is used as an indication of maturity or rank in the coalification sequence and is not related to the physical properties of the coal.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 13909, *Hard coal and coke — Mechanical sampling*

ISO 18283, *Hard coal and coke — Manual sampling*

ASTM D409, *Standard Test Method for Grindability of Coal by the Hardgrove-Machine Method*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

hard coal

coal having a gross calorific value of more than 24 MJ/kg on a moist, ash-free basis

4 Principle

Samples shall be collected and prepared using ISO 13909 and ISO 18283.

Treatment of a prepared sample of coal of limited size range under defined conditions in a laboratory apparatus of standardized design (calibrated Hardgrove machine). Derivation of the grindability index from sieve analysis of the ground product and by reference to a calibration chart prepared from standard reference material.

For all related equipment requirements, sample preparation, test procedure and reporting shall be in accordance with ASTM D409.

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