

Cycles

Part 16. Specification for replacement brake-blocks

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee GME/25, Cycles, upon which the following bodies were represented:

- Association of Consulting Scientists
- Association of Cycle Traders
- Bicycle Association of Great Britain
- British Cycling Federation
- British Retail Consortium
- British Rubber Manufacturers' Association Ltd.
- Consumer Policy Committee of BSI
- Cyclists' Touring Club
- Department of Transport
- Institute of Trading Standards Administration
- Royal Society for the Prevention of Accidents

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Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
Specification	
Introduction	1
1 Scope	1
2 References	1
3 Definitions	1
4 Instructions to be supplied with brake-blocks	2
5 Marking	2
6 Performance tests	2
Annexes	
A (informative) Method of determining the radius of gyration of the flywheel	6
B (informative) Method of calculating kinetic energy for the machine test	6
Table	
1 Forces to be applied between each brake-block and the rim	5
Figures	
1 Typical arrangement of a road-wheel connected to a flywheel by a mechanical drive	3
2 Arrangement of water nozzles	4
A.1 Bifilar pendulum method of determining the radius of gyration	6
A.2 Trifilar pendulum method of determining the radius of gyration	6
List of references	Inside back cover

Foreword

This Part of BS 6102 has been prepared by Technical Committee GME/25, and forms part of a series of documents which relate to pedal-cycles.

Whilst for many years there have been stringent requirements specified in BS 6102 : Part 1 for complete bicycles to be tested to ensure satisfactory stopping distances under both dry and wet conditions, there have been no requirements for replacement brake-blocks to meet similar performance standards.

This specification is intended to overcome the previous deficiency with simple, rapid and realistic laboratory tests although road-tests on complete bicycles are also permitted.

Instructions and identification markings for brake-blocks are also included.

Tests for durability or fade characteristics have not been specified.

Attention is drawn to the following statutory regulations relevant to bicycles:

The Electrically Assisted Pedal Cycles Regulations 1983 (SI No. 1168) [1];

The Pedal Cycles (Construction and Use) Regulations 1983 (SI No. 1176) [2];

The Pedal Cycles (Safety) Regulations 1984 (SI No. 1057) [3];

The Road Vehicle Lighting Regulations 1989 (SI No. 2280) [4].

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

Specification

Introduction

The aim of this Part of BS 6102 is to ensure that replacement brake-blocks which operate on the rims of bicycles have satisfactory frictional characteristics and will, when fitted to a bicycle, give stopping distances not greater than those specified for complete bicycles in ISO 4210.

Tests may be conducted on bicycles in accordance with 2.2.5 of ISO 4210 but, in order to expedite results and to minimize test costs, a type of test machine has been specified in broad terms.

The machine incorporates an easily changeable road-wheel so that appropriate types of rim can be employed. Also, the test arrangements provide for tests to be conducted realistically under wet or dry conditions by bringing to rest the wheel which is coupled to a source of rotational kinetic energy.

Instructions to be supplied with brake-blocks and markings for brake-blocks are also specified.

1 Scope

This Part of BS 6102 specifies performance requirements for replacement brake-blocks intended for use only on the rims of bicycles intended for use on public roads, and on which the saddle can be adjusted to provide a saddle height of 635 mm or more.

It does not apply to brakes intended for specialized types of bicycle such as tradesmen's delivery bicycles, tandems, toy bicycles and bicycles designed and equipped for use in sanctioned competitive events.

2 References

2.1 Normative references

This Part of BS 6102 incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies: any subsequent amendments to or revisions of the cited publication apply to this Part of BS 6102 only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

2.2 Informative references

This Part of BS 6102 refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions

For the purposes of this Part of BS 6102 the definitions given in BS 6102 : Part 1 apply, together with the following.

3.1 brake-block

Block of frictional material which contacts and rubs on the rim during braking.

3.2 brake-block holder

Shoe which contains the brake-block and provides a means of attachment to the brake-arm.

3.3 integral brake-block holder

Unit in which the brake-block and holder are combined.

3.4 braking distance

Distance travelled in bringing a bicycle to rest from the moment of application of the brakes in a road test.

3.5 equivalent linear braking distance

Linear distance travelled by the surface of the flywheel in the tests specified in clause 6.

3.6 brake-block application force

Force acting between the brake-block and the rim of the road-wheel.

3.7 rim

Outer, circular part of the wheel which carries the tyre and upon which the brake-blocks act.

3.8 test operation

Single braking test including deceleration from the test speed and recording of the braking distance.