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Specification for subsoil and requirements for use

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Contents

Summary of pages

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 December 2013. It was prepared by Technical Committee AW/20, *Topsoil, other growing media and turf.* A list of organizations represented on this committee can be obtained on request to its secretary.

Relationship with other publications

This British Standard is intended to complement BS 3882 which specifies topsoil.

Information about this document

Test laboratory accreditation. Users of this British Standard are advised to consider the desirability of selecting test laboratories that are accredited to BS EN ISO/IEC 17025 by a national or international accreditation body.

Use of this document

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Hazard warnings

WARNING. This British Standard calls for the use of substances and/or procedures that can be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Requirements in this standard are drafted in accordance with the *Rules for the structure and drafting of UK standards,* subclause **J.1.1**, which states, "Requirements should be expressed using wording such as: 'When tested as described in Annex A, the product shall ...'". This means that only those products that are capable of passing the specified test will be deemed to conform to this standard.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

In particular, attention is drawn to the Environmental Protection Act 1990 [1].

Introduction

The subsoil is an essential component of most soil profiles. Only soil that is shallow over rock lacks a subsoil layer. Subsoil provides storage of moisture, transmits rainfall to deeper layers or watercourses and enables deep rooting by trees, shrubs, grasses and other plants. It controls the waterlogging of surface layers, helps vegetation and crops to withstand summer droughts and provides anchorage for trees.

Subsoil plays an important role in reducing the amount and speed of surface water runoff, reduces the risk of erosion and flooding and consequently is an integral part of sustainable drainage systems.

Subsoil can be both naturally-occurring and manufactured. Naturally-occurring subsoil is the product of dynamic chemical, physical and (to a lesser extent) biological processes acting on weathered mineral matter. Subsoil can be manufactured by combining mineral ingredients to provide a medium that can develop properties similar to naturally-occurring subsoil.

Soil is a dynamic and fragile material, which when managed appropriately fulfils its function, but is easily damaged by mishandling. It is important that soil is lifted, transported, stored and spread carefully. Damage during handling can result in a rapid deterioration in the functions soil provides.

NOTE 1 Transporting soil involves mechanical handling, i.e. excavation, loading, transport and distribution on site. Not all naturally-occurring soils would survive such handling and retain the ability to develop into an acceptable soil in a reasonable time at the new site, even though in their undisturbed, naturally-occurring condition they might be very productive and capable of sustaining plant growth over long periods of time. For example, clay textured soil could be very productive in situ but its structure might suffer damage during stripping (or other handling activities) that could only be reversed by years of careful management.

NOTE 2 In the context of soil profile construction, the subsoil is also an important medium for root growth since it provides reserves of water and available plant nutrients and mechanical anchorage.

1 Scope

This British Standard specifies requirements for the classification, composition and use of bulk soils that are moved or traded for creating soil profiles intended to support plant growth. The standard is not applicable to topsoil, or to subsoil that is to remain in situ. It is not intended to preclude the use of subsoil that is already on site and suitable for its intended purpose. This standard specifies requirements for multipurpose subsoil, which is fit for the majority of needs, and also specific purpose subsoils that are acidic or calcareous, for specialist use where acidic or calcareous soil profiles are required. It also specifies requirements for sampling and analysis of subsoil.

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.

BS 7755-5.6:1999 (ISO 11272:1998), *Soil quality – Part 5: Physical methods – Section 5.6: Determination of dry bulk density*

BS EN 12579:2000, *Soil improvers and growing media – Sampling*