

ICS 13.080
CCS B10



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 45107-2024

Technical requirements for topsoil stripping and reusing

表土剥离及其再利用技术要求

Issued on: December 31, 2024

Implemented on: July 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

1	Scope
2	Normative references
3	Terms and definitions
4	Basic Principles
5	Investigation and evaluation
5.1	Preparation before investigation
5.2	Topsoil investigation and evaluation
5.3	Storage area survey and requirements
5.4	Reuse Area Survey and Requirements
6	Determination of soil organic matter
6.1	Preparation before stripping
6.2	Construction
6.3	Calculation of peeling rate
7	Topsoil Transportation
7.1	Transportation routes
7.2	Transport machinery
7.3	Transport requirements
8	Topsoil Storage
8.1	General requirements
8.2	Storage
8.3	Calculation of stored earthwork volume
8.4	Maintenance
9	Reuse of topsoil
9.1	General requirements
9.2	Construction
16	Reference
17	Determination of soil chloride ion content

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by the Ministry of Agriculture and Rural Affairs of the People's Republic of China. This document is under the jurisdiction of the National Technical Committee on Soil Quality Standardization (SAC/TC404). This document was drafted by: Shanghai Chenshan Botanical Garden, Shanghai Construction Engineering Environmental Technology Co., Ltd., Nanjing Institute of Soil Science, Chinese Academy of Sciences, Shanghai Municipal Construction Land and Land Arrangement Affairs Center, Jilin Agricultural University, China Three Gorges Corporation, Huazhong Agricultural University, Shanghai Urban Construction Bureau Municipal Planning and Design Institute, Shanghai Pudong New Area Ecological Environment Bureau, Shanghai Garden (Group) Co., Ltd., Jiangsu Provincial Quality and Standardization Research Institute Institute of Environmental Planning, Ministry of Ecology and Environment. The main drafters of this document are. Fang Hailan, Zhang Ganlin, Zhou Jianqiang, Dou Sen, Liu Jing, Zhang Jingsha, Cai Chongfa, Wang Lei, Li Chong, Chen Xiang, Shang Kankan, Xia Qing, Dong Fangyin, Dong Bin, Hu Yonghong, Pang Xuelei, Yang Jinling, Kang Yongliang, Peng Hongling, Ye Sufen, Zhao Bowen, Wang Xiankai, Chen Lin, Zhang Guowei, Zhang Qian, Zhu Huiling, Zhu Yu, Xu Wei, Fan Yun, Zhang Feng, and Yi Jun. Technical requirements for topsoil stripping and its reuse

1 Scope

GB/T 45107-2024 sets the Chinese technical requirements for stripping topsoil and putting it back to use. Behind it is a policy that treats topsoil as a resource to be recovered rather than spoil to be dumped: China loses fertile soil to construction, mining and infrastructure at a great rate, and stripping the A horizon before the works and reusing it to reclaim degraded land or to build new farmland is one of the few ways to offset that. The standard sets the basic principles, then the investigation and evaluation stage, the preparation, the survey of the topsoil to be stripped and the assessment of its quality and suitability; then the stripping itself, its depth, timing, machinery and the avoidance of compaction and mixing with subsoil; the transport and the temporary storage, where most of the biological value is lost if stockpiles are badly made; the reuse, its placement, thickness and treatment on the receiving site; and the acceptance, monitoring and records. It takes effect on 1 July 2025.

This document specifies the topsoil investigation and evaluation, topsoil stripping, topsoil transportation, topsoil storage, topsoil management, and other aspects of the topsoil recovery process. Technical requirements for soil reuse, etc. This document is applicable to the topsoil of cultivated land, gardens, forests, grasslands and other plots involved in construction occupation, temporary land use, land consolidation and other work. Stripping and reuse activities, other activities involving topsoil stripping and reuse can be implemented for reference.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB 15618 Soil Environmental Quality Agricultural Land Soil Pollution Risk Control Standard (Trial Implementation)

GB/T 28407-2012 Agricultural land quality classification procedures

GB/T 30600 General rules for high-standard farmland construction

GB/T 33469 Cultivated land quality grades

GB/T 36197 Soil quality - Guide to soil sampling techniques

GB 36600 Soil Environmental Quality - Risk Control Standard for Soil Pollution in Construction Land (Trial Implementation)

GB 50433-2018 Technical Standard for Soil and Water Conservation in Production and Construction Projects CJJ

82 Specification for construction and acceptance of landscaping projects CJ/T 340 Greening Planting Soil

HJ651 Technical Specifications for Mine Ecological Environment Protection and Restoration (Trial) LY/T 1225 Determination of particle composition (mechanical composition) of forest soil LY/T 1237 Determination of organic matter in forest soil and calculation of carbon-nitrogen ratio LY/T 1239 Determination of pH value of forest soil LY/T 1251 Analysis of water-soluble salt content in forest soil

NY/T 1121.2 Soil testing Part

3 Terms and definitions

The following terms and definitions apply to this document.

6 Determination of soil organic matter

NY/T 1121.17 Soil testing Part

17 Determination of soil chloride ion content

NY/T 1121.18 Soil testing Part

18.Determination of soil sulfate ion content TD/T 1012 Specification for planning and design of land consolidation projects TD/T 1036 Land Reclamation Quality Control Standard

chinastandards.org · PREVIEW