

Wastewater treatment plants —

Part 6: Activated sludge process

The European Standard EN 12255-6:2002 has the status of a
British Standard

ICS 13.060.30

National foreword

This British Standard is the official English language version of EN 12255-6:2002.

The UK participation in its preparation was entrusted to Technical Committee B/505, Wastewater engineering, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

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This British Standard, having been prepared under the direction of the Building and Civil Engineering Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 4 April 2002

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 165, Wastewater engineering, the Secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2002, and conflicting national standards shall be withdrawn at the latest by December 2002.

In this standard the Annex A is informative.

It is the sixth part prepared by the Working Groups CEN/TC 165/WG 42 and 43 relating to the general requirements and processes for treatment plants for a total number of inhabitants and population equivalents (PT) over 50. The parts of the series are as follows:

- *Part 1: General construction principles*
- *Part 3: Preliminary treatment*
- *Part 4: Primary settlement*
- *Part 5: Lagooning processes*
- *Part 6: Activated sludge processes*
- *Part 7: Biological fixed-film reactors*
- *Part 8: Sludge treatment and storage*
- *Part 9: Odour control and ventilation*
- *Part 10: Safety principles*
- *Part 11: General data required*
- *Part 12: Control and automation*
- *Part 13: Chemical treatment — Treatment of wastewater by precipitation/flocculation*
- *Part 14: Disinfection*
- *Part 15: Measurement of the oxygen transfer in clean water in aeration tanks of activated sludge plants*
- *Part 16: Physical (mechanical) filtration¹⁾*

NOTE For requirements on pumping installations at wastewater treatment plants, provided initially as *Part 2, Pumping installations for wastewater treatment plants*, see EN 752-6, *Drain and sewer systems outside buildings — Part 6: Pumping installations*.

EN 12255-1, EN 12255-3 to EN 12255-8 and EN 12255-10 and EN 12255-11 were implemented together as a European package (Resolution BT 152/1998).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

¹⁾ In preparation.

1 Scope

This European Standard specifies the performance requirements for treatment of wastewater using the activated sludge process for plants over 50 PT.

Differences in wastewater treatment throughout Europe have led to a variety of systems being developed. This standard gives fundamental information about the systems; this standard has not attempted to specify all available systems.

Detailed information additional to that contained in this standard may be obtained by referring to the bibliography.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1085, *Wastewater treatment — Vocabulary*.

EN 12255-1, *Wastewater treatment plants — Part 1: General construction principles*.

EN 12255-10, *Wastewater treatment plants — Part 10: Safety principles*.

EN 12255-11, *Wastewater treatment plants — Part 11: General data required*.

prEN 12255-12, *Wastewater treatment plants — Part 12: Control and automation*.

3 Terms and definitions

For the purposes of this European Standard the terms and definitions given in EN 1085 apply.

4 Requirements

4.1 General

The biological reactors and the clarifiers connected by the return sludge recirculation form a unit process: the activated sludge process. The performance of the process depends on the biological and chemical reactions in the activated sludge tanks as well as the separation of the activated sludge in the final clarifiers.

NOTE Biological treatment and clarification may be combined in the same tank, e.g. a sequencing batch reactor (SBR).

The design shall take account of the requirements specified in EN 12255-1, EN 12255-10, EN 12255-11 and prEN 12255-12.