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**Čistilne naprave za odpadno vodo - 7. del: Biološki reaktorji s pritrjeno biomaso**

Wastewater treatment plants - Part 7: Biological fixed-film reactors

Kläranlagen - Teil 7: Biofilmreaktoren

Stations d'épuration - Partie 7 : Réacteurs biologiques à cultures fixées

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**Wastewater treatment plants - Part 7: Biological fixed-film  
reactors**

Stations d'épuration - Partie 7 : Réacteurs biologiques  
à cultures fixées

Kläranlagen - Teil 7: Biofilmreaktoren

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**EN 12255-7:2026 (E)****European foreword**

This document (EN 12255-7:2026) has been prepared by Technical Committee CEN/TC 165 “Wastewater”, 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of an identical text or by endorsement, at the latest by December 2026, and conflicting national standards shall be withdrawn at the latest by December 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12255-7:2002.

EN 12255-7:2026 includes the following significant technical changes with respect to EN 12255-7:2002:

- a) comprehensive revision and additions in all sections;
- b) addition of design recommendations;
- c) addition of moving bed reactors (MBR);
- d) adaptation to the current state of the art;
- e) updating of the normative references.

It is the seventh part prepared by the Working Group CEN/TC 165/WG 40 relating to the general requirements and processes for treatment plants for a total number of inhabitants and population equivalents (PT) over 50. The EN 12255 series with the generic title *Wastewater treatment plants* consists of the following parts:

- *Part 1: General construction principles*
- *Part 2: Storm management systems*
- *Part 3: Preliminary treatment*
- *Part 4: Primary settlement*
- *Part 5: Lagooning processes*
- *Part 6: Activated sludge process*
- *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) filtration*

NOTE 1 Part 2 is under preparation.

NOTE 2 For requirements on pumping installations at wastewater treatment plants see the EN 16932 series, *Drain and sewer systems outside buildings — Pumping systems*.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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## 1 Scope

This document of the EN 12255 series specifies design principles and performance requirements for secondary and tertiary treatment of wastewater in biological fixed-film reactors at wastewater treatment plants for more than 50 PT.

Its primary application is for wastewater treatment plants for the treatment of domestic and municipal wastewater. It can also be applied for biodegradable industrial wastewater.

Biological fixed film reactors include rotating biological contactors (RBC), biological trickling reactors (BTR), moving bed biological reactors (MBBR), submerged medium reactors (SMR) and submerged media filters (SMF). Membrane bioreactors (MBR) and anaerobic processes are not within the scope.

Some of the systems using fixed film bacteria are enhanced activated sludge systems (hybrid systems). For such systems, EN 12255-6 also applies.

This document specifies fundamental information about typical systems and does not provide information about all available fixed film systems.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

EN 12255-3, *Wastewater treatment plants — Part 3: Preliminary treatment*

EN 12255-6, *Wastewater treatment plants — Part 6: Activated sludge process*

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

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

EN 16323:2014, *Glossary of wastewater engineering terms*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16323 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### **biofilm**

layer consisting of microorganisms that forms on a support medium

Note 1 to entry: Biofilms consist of a complex agglomeration of microorganisms, immobilized in a matrix of polymeric substances. Biofilms grow on the surface of fixed or moving support media or are able to form dense agglomerates.

[SOURCE: EN 16323:2014, 2.3.3.3, modified – Note 1 to entry added]