DIN EN 12566-1:2016-12 (E)

Small wastewater treatment systems for up to 50 PT - Part 1: Prefabricated septic tanks

Contents

Page

European foreword ... 6

1 Scope ... 8

2 Normative references ... 8

3 Terms and definitions ... 8

4 Product characteristics ... 9
4.1 Dimensions ... 9
4.1.1 Inlets, outlets and connections ... 9
4.1.2 Ventilation ... 9
4.1.3 Design Basis ... 9
4.2 Load bearing capacity ... 9
4.3 Watertightness ... 10
4.3.1 General ... 10
4.3.2 Water test ... 10
4.3.3 Vacuum test ... 10
4.3.4 Pneumatic pressure test ... 10
4.4 Hydraulic efficiency ... 10
4.5 Design ... 10
4.6 Access ... 10
4.7 Durability ... 11
4.8 Reaction to fire ... 11
4.8.1 General ... 11
4.8.2 Septic tank classified as Class A1 without the need for testing ... 11
4.8.3 Septic tank classified according to the test results ... 12
4.9 Dangerous substances ... 12

5 Testing, assessment and sampling methods ... 12
5.1 Load bearing capacity ... 12
5.1.1 General ... 12
5.1.2 Load bearing capacity determined by calculation ... 13
5.1.3 Load bearing capacity determined by testing ... 13
5.2 Watertightness ... 15
5.3 Hydraulic efficiency ... 15

6 Assessment and verification of constancy of performance – AVCP ... 16
6.1 General ... 16
6.2 Type testing ... 16
6.2.1 General ... 16
6.2.2 Test samples, testing and compliance criteria ... 17
6.2.3 Test reports ... 17
6.2.4 Shared other party results ... 17
6.2.5 Cascading determination of the product type results ... 18
6.3 Factory production control ... 19
6.3.1 General ... 19
6.3.2 Requirements ... 20
6.3.3 Product specific requirements ... 23
6.3.4 Initial inspection of factory and of FPC ... 23
6.3.5 Continuous surveillance of FPC ... 24

6.3.6 Procedure for modifications 24
6.3.7 One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity 24
7 Classification and designation 25
7.1 Classification 25
7.2 Nominal capacity 25
8 Marking, labelling and packaging 25
8.1 Marking 25
8.2 Installation instructions 26
8.3 Operating and maintenance instructions 26
Annex A (normative) Watertightness and nominal capacity tests 27
A.1 General 27
A.2 Capacity test 27
A.2.1 Sample 27
A.2.2 Procedure 27
A.2.3 Expression of results 27
A.3 Watertightness tests 27
A.3.1 Selection of the test 27
A.3.2 Water test 27
A.3.2.1 Sample 27
A.3.2.2 Procedure 28
A.3.2.3 Expression of results 28
A.3.3 Air permeability vacuum test 28
A.3.3.1 Sample 28
A.3.3.2 Procedure 28
A.3.3.3 Expression of results 29
A.3.4 Pneumatic pressure test 29
A.3.4.1 Sample 29
A.3.4.2 Procedure 29
A.3.4.3 Expression of results 30
Annex B (normative) Hydraulic efficiency test 31
B.1 General 31
B.2 Experimental apparatus 31
B.3 Synthetic materials used for testing 32
B.4 Preparation of test 32
B.5 Test parameters 32
B.6 Procedure 33
B.7 Calculation of test results 33

Annex C (informative) Information for execution **34**
C.1 Examples for outlet devices **34**
C.2 Openings in internal walls **35**
Annex D (normative) Test methods for structural behaviour **36**
D.1 Selection of test method **36**
D.2 Concrete septic tank **36**
D.2.1 Crushing test methods **36**
D.2.2 Test procedures **37**
D.2.2.1 Type A test (vertical load) **37**
D.2.2.1.1 Sample **37**
D.2.2.1.2 Procedure **37**
D.2.2.1.3 Expression of results **37**
D.2.2.2 Type B test (horizontal load) **38**
D.2.2.2.1 Sample **38**
D.2.2.2.2 Procedure **38**
D.2.2.2.3 Expression of results **38**
D.2.2.3 Type C test (vertical load) **39**
D.2.2.3.1 Sample **39**
D.2.2.3.2 Procedure **39**
D.2.2.3.3 Expression of results **39**
D.3 Polyethylene septic tank **39**
D.3.1 General **39**
D.3.2 Vertical load test **39**
D.3.2.1 Sample **39**
D.3.2.2 Procedure **40**
D.3.2.3 Expression of results **40**
D.4 Determination of mechanical characteristics of test samples used for calculation **40**
D.4.1 Concrete **40**
D.4.2 Glass Reinforced Plastic **41**
D.5 Vacuum test for Glass Reinforced Plastic or steel septic tank **41**
D.6 Pit test **41**
D.6.1 Sample **41**
D.6.2 Procedure **41**
D.6.3 Expression of results **42**
Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation **43**
ZA.1 Scope and relevant characteristics **43**

ZA.2 Procedure of attestation of conformity of prefabricated septic tanks 44
ZA.2.1 System(s) of AVCP 44
ZA.2.2 Declaration of performance (DoP) 47
ZA.2.2.1 General 47
ZA.2.2.2 Content 47
ZA.2.2.3 Example of DoP 48
ZA.3 CE marking and labelling 50
Bibliography 53