

Sanitary tapware — Waste fittings for basins, bidets and baths — General technical specifications

The European Standard EN 274:1992 has the status of a
British Standard

UDC 621.646.2:644.6:696.14:620.1

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This British Standard, having been prepared under the direction of the Technical Committee B/505, was published under the authority of the Standards Board and comes into effect on 15 January 1993

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The following BSI references relate to the work on this standard:
Committee reference B/505/11
Announced in *BSI News*
April 1992

ISBN 0 580 21053 7

Amendments issued since publication

Amd. No.	Date	Comments

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National foreword

This British Standard has been prepared under the direction of Technical Committee B/505¹⁾ Waste Water Engineering and is the English language version of EN 274:1992 *Sanitary tapware — Waste fittings for basins, bidets and baths — General technical specifications*, published by the European Committee for Standardization (CEN).

EN 274 was produced as a result of European discussion in which the UK took an active part. The UK voted against this standard at Enquiry and Formal Vote Stage but the analysis of voting, in accordance with clause 5.1 of the Common CEN/CENELEC Rules, resulted in a positive vote. In consequence the document was accepted as a European Standard.

The standard covers only fittings suitable for use with 40 and 50 ND waste pipes, and G1 1/4 B and G1 1/2 B threaded connections. The fittings are not compatible with waste pipes in general use in the UK.

The standard is now under revision in CEN/TC/165/WG/11 (B/505/11).

WARNING. The incorrect use of products conforming to this standard in a UK waste water system could result in a health hazard.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 20, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

¹⁾ Work on this standard was begun under Technical Committee SEB/2 (CEN/TC 34), was transferred to Technical Committee B/504 (CEN/TC 164) before being passed to B/505 (CEN/TC 165).

UDC 621.646.2:644.6:696.14:620.1

Descriptors: Sanitary valves, drainage devices, bidet, pedestal wash-basins, bathtubs, classification, specification, dimension, hydraulic properties, leaktightness, verification

English version

Sanitary tapware — Waste fittings for basins, bidets and baths — General technical specifications

Robinetterie sanitaire — Dispositifs de vidage
des lavabos, bidets et baignoires —
Spécifications techniques générales

Sanitär-Armaturen — Ablaufgarnituren für
Waschtische, Sitzwaschbecken und
Badewannen — Allgemeine technische
Anforderungen

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Comité Européen de Normalisation
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Foreword

This European Standard has been prepared by CEN/TC 34 “*Sanitary tapware — Dimensions, quality*” in close cooperation with CEN/TC 7 working on the connecting dimensions of sanitary appliances.

The members of CEN/TC 34 had initially intended to draw up a single document covering the waste fittings of all sanitary appliances, but as the work of CEN/TC 7 on sinks and shower trays was not sufficiently advanced, the technical committee preferred to vote on this part of the standard which has obtained wide agreement within the two committees and which is limited to basins, bidets and baths.

ISO/TC 138 is currently engaged in work on plastics traps. If the International Standard is adopted as an EN, the documents will have to be harmonized.

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1 Scope

This standard specifies:

- dimensional, hydraulic and physico-chemical properties which waste systems shall have;
- the test methods enabling these properties to be verified.

Quality control and quality assurance problems will be handled by the competent bodies.

2 Field of application

This standard is applicable to the waste systems of basins, bidets and baths installed in areas for body hygiene (toilets, bathrooms, etc.), whatever the purpose of the building.

It is applicable to the waste fittings defined in clause 4.

It is not applicable to waste systems for sinks and shower trays which will be covered by another standard.

3 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.

EN 31:1977, *Pedestal wash basins — Connecting dimensions*.

EN 31:1977/A1:1987

EN 32:1977, *Wall hung wash basins — Connecting dimensions*.

EN 32:1977/A1:1987

EN 35:1977, *Pedestal bidets over rim supply only — Connecting dimensions*.

EN 35:1977/A1:1987

EN 36:1977, *Wall hung bidets over rim supply only — Connecting dimensions*.

EN 36:1977/A1:1987

EN 232:1988, *Baths — Connecting dimensions*.

EN 248:1988, *Sanitary tapware — General technical specifications for electrodeposited nickel chrome coatings*.

ISO 228-1:1982, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Designation — dimensions — tolerances*.

4 Definitions

4.1

waste outlet

device fitted on the sanitary appliance whereby the water can be evacuated from the bowl (direct evacuation and possible evacuation through the overflow). It can be sealed by means of a flap or plug with or without grille. If not, it has a grille

4.2

overflow

device whereby water can also be evacuated from the bowl over a certain level, well above the waste outlet

4.3

trap

hydraulic sealing device between the waste outlet and the evacuation pipe, the purpose of which is to prevent polluted air from the evacuation pipes coming into contact with the air in the inhabited areas, without obstructing the evacuation of the liquids

5 Classification

5.1 Waste outlets

Waste outlets may be manufactured in one piece or may comprise various pieces joined together mechanically.

5.1.1 Waste outlet sealed by a flap or plug (with or without grille)

With mechanical control

This control may be:

- internal — In this case, the control system may be in contact with the water as it is located in the overflow device.
- external — In this case, the largest part of the control system is never in contact with the water.

With non-mechanical control (called a plug waste outlet).

5.1.2 Waste outlet without sealing by flap or plug (called grille waste outlet)

This comprises a safety grille at the inlet intended to check objects which may fall into the sanitary appliance.

5.2 Traps

- Tube trap (U or S)
- Bottle trap with division
- Central dip tube bottle trap.

6 Materials, design and manufacture

6.1 Recommended materials

All waste systems shall be made of materials which can withstand the action of hot water of maximum temperature $95\text{ }^{\circ}\text{C}$ and household waste water.

The materials listed may refer to ISO standards where these exist.

The different parts of the waste system shall be made from the following materials:

For waste outlets and traps:

- copper base alloys,
- plastics materials,
- stainless steels,
- proofed cast iron,
- or any other material giving equivalent results,
- or a combination of two or several of these elements.

For the grilles (overflow, waste):

- corrosion-proof metal material, stainless steel or plastics materials.

For the waste mechanisms:

- stainless or corrosion-proof material.

For the waste outlet flaps and plugs:

- corrosion-proof metal material,
- elastomer or any other material giving equivalent results.

For the joints: elastomer or any other material giving equivalent results.

6.2 Condition of visible surfaces

The visible surfaces as defined in EN 248:1988 shall comply with the requirements of clauses 4, 5 and 6 of that standard.

6.3 Quality control of the coating

For electrolytically coated surfaces, the quality of the coating shall be checked in compliance with the requirements of clause 7 of EN 248:1988.

6.4 Testing of plastics materials waste systems

Waste systems made of plastics materials or combinations of plastics materials shall be tested as follows.

6.4.1 Quality control of the moulding

6.4.1.1 Test apparatus

An oven adjustable to $150 \pm 2\text{ }^{\circ}\text{C}$, except for polyethylene where the temperature is $120 \pm 2\text{ }^{\circ}\text{C}$, with a heating power such that the temperature is reached again a maximum fifteen minutes after introduction of the waste fittings.

6.4.1.2 Procedure

— Place the various constituent parts of the waste fittings in the oven which has previously been heated to $150 \pm 2\text{ }^{\circ}\text{C}$ so that they cannot touch each other during the test.

— Check that the temperature returns to $150 \pm 2\text{ }^{\circ}\text{C}$ in less than 15 minutes; note the time when the oven reaches this temperature as the start of the exposure period.

— After thirty minutes, remove the test pieces from the oven, taking care not to deform or destroy them.

— Allow the test pieces to cool in air until they can be handled.

— Examine each of them to check for any surface faults which appear in particular on the solder line or around an injection point if there is one.

6.4.1.3 Properties

After testing, the test pieces shall not show:

- any opening over the entire thickness of the wall at any point whatsoever on a solder line,
- any surface deterioration penetrating through more than half the thickness of the wall, in particular around an injection point.

NOTE Deformations are permitted in the test pieces.

6.4.2 Behaviour with regard to thermal shock

6.4.2.1 Procedure

Mount the fitting with free outlet on the same type of appliance as it is fitted in normal use. Subject it to 5 cycles of water circulation, each cycle comprising:

- 15 minutes of water flow at $95 \pm 1\text{ }^{\circ}\text{C}$ at a flow rate of 0,5 l/s.
- immediately afterwards, 10 minutes of water flow at $20 \pm 5\text{ }^{\circ}\text{C}$ at a flow rate of 0,5 l/s.

6.4.2.2 Properties

No leakage shall be observed at the end of the test, no deformation shall be present.

NOTE Leaks are tolerated during the first two cycles as long as they are small, and they can be eradicated by tightening the assembly units.

If this is the case, after these first 2 cycles, 5 complete cycles shall be made as described above.

6.5 Testing the internal stresses for drawn brass components

6.5.1 Test method

The components of waste fittings of bent brass tube shall be tested as follows:

- 1) Degrease the waste fittings to be tested.