Sanitary appliances — Baths made from crosslinked cast acrylic sheets — Requirements and test methods

ICS 91.140.70

National foreword

This British Standard is the UK implementation of EN 198:2008. It supersedes BS 4305-1:1989 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/503, Sanitary appliances.

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

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Appareils sanitaires - Baignoires en feuilles d'acrylique réticulées coulées - Exigences et méthodes d'essai

Sanitärausstattungsgegenstände - Badewannen hergestellt aus vernetzten gegossenen Acrylplatten - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 4 July 2008.

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Foreword

This document (EN 198:2008) has been prepared by Technical Committee CEN/TC 163 “Sanitary appliances”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by February 2009, and conflicting national standards shall be withdrawn at the latest by February 2009.

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

This document supersedes EN 198:1987.

Annex B provides details of significant technical changes between this European Standard and the previous edition.

This revised version includes a limitation of the scope to baths made from crosslinked cast acrylic sheet conforming to the requirements of EN 263, *Sanitary appliances - Crosslinked cast acrylic sheets for baths and shower trays for domestic purposes*

Attention is drawn to EN 14516, *Baths for domestic purposes*, which has been prepared under the Mandate M/110 "Sanitary Appliances" which was given to CEN by the European Commission and the European Free Trade Association and supports the Essential Requirements to allow CE marking under the Construction Products Directive (89/106/EEC).

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

1 Scope

This European Standard specifies requirements for baths for domestic purposes made from crosslinked cast acrylic sheet conforming to EN 263 with the aim of ensuring that the product, when installed in accordance with the manufacturer's instructions, will provide satisfactory performance in use.

This European Standard is applicable to all sizes and shapes of baths.

2 Normative references

The following referenced documents are indispensable for the application 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 232, *Baths – Connecting dimensions*

EN 263, *Sanitary appliances – Crosslinked cast acrylic sheets for baths and shower trays for domestic purposes*

3 Terms and definitions

For the purposes of this document the following terms and definitions apply.

3.1
domestic purposes
use in homes, hotels, accommodation for students, hospitals and similar buildings, except when special medical provisions are required

4 Requirements

4.1 General

The manufacturer shall provide instructions for installation and care with each bath.

The bath shall be free from sharp edges that would be exposed after the installation of the bath in accordance with the manufacturer’s instructions.

4.2 Material

The bath shall be manufactured from crosslinked cast acrylic material in accordance with EN 263.

4.3 Surface appearance

When the bath is visually inspected under strong and oblique illumination there shall be no evidence of cracks, chips, or other surface defects, such as unexpected changes in colours, etc., which will impair the appearance or performance of the bath.

4.4 Waste outlet hole

The bath shall have at least one outlet hole. The dimensions of the waste outlet hole and the clearance around the waste outlet hole shall either be in accordance with the requirements of EN 232 or the manufacturer shall supply or recommend a suitable waste outlet fitting.

4.5 Overflow hole

When the bath is provided with an overflow hole the dimensions of the overflow hole and the clearance around the overflow hole shall either be in accordance with the requirements of EN 232 or the manufacturer shall supply or recommend a suitable overflow fitting.

4.6 Hole edges

The edges of any holes in the bath shall not show evidence of chips, cracks, or any other defects that may impair the appearance or performance of the bath.

4.7 Bath-mounted tapware

When the bath is intended to accommodate bath-mounted tapware the space and area provided shall either comply with the requirements of EN 232 or the manufacturer shall supply or recommend suitable tapware.

4.8 Handgrips

When a handgrip(s) is fitted it shall be tested in accordance with Annex A and the bath and the handgrip shall be free from any permanent deformation or other defects that will impair the functioning and/or the appearance of the bath.

If not pre-fitted by the manufacturer, the manufacturer's instructions shall indicate how and where the handgrips are fitted.

4.9 Dimensional deviations

The dimensions of baths shall not deviate from the size quoted by the manufacturer by more than ± 5 mm.

If the manufacturer states two sizes (e.g. both a work size and a nominal size), the manufacturer shall state to which size the permitted deviations apply.

For round baths, length and width correspond to the diameter.

4.10 Geometric deviations

4.10.1 General

The straight sides or edges of the bath that might abut independent surroundings or supporting structures shall comply with the requirements of 4.10.2 to 4.10.4 and all baths shall comply with 4.10.5. These requirements are not applicable to sides or edges that are purposely designed as curves or slopes.

4.10.2 Squaring

When tested in accordance with A.2.2, the deviation from square, Δq, shall be less than or equal to 5 mm.

4.10.3 Straightness of the rim sides

When tested in accordance with A.2.3, the deviation from straightness of the rim sides, Δs, shall be less than or equal to 5 mm.

4.10.4 Straightness of the bottom edge of the rim

When tested in accordance with A.2.4, the total deviation from straightness of the bottom edge of the rim, Δr, shall be less than or equal to 5 mm.

4.10.5 Flatness of the top surface of the rim

When tested in accordance with A.2.5, the deviation from flatness of the top surface of the rim, *c*, shall be less than or equal to 5 mm.

4.11 Bottom of the bath

When the bath is installed in accordance with the manufacturer's instructions and the waste outlet hole is open, all water shall empty from the bath unless prevented by surface tension.

4.12 Resistance to temperature changes

When tested in accordance with A.3, baths shall show no evidence of distortion or other defects that impair the appearance or functioning of the bath and any deflection shall be less than or equal to 4 mm.

4.13 Resistance to impact

When tested in accordance with A.4, the bottom and the rim of the bath shall show no evidence of distortion or other defects that impair the appearance or functioning of the bath.

4.14 Permitted deflections

When tested in accordance with A.5, the deflections shall be less than or equal to the values given in Table 1.

Table 1 - Permitted deflections

Test method	Maximum deflections[a] under load and permitted residual deflections for installation methods[b] (mm)				
	a)	b)	c)	d)	e)
A.5.5	≤ 1 on the four free rims ≤ 2 on the bottom	≤ 1 on the three free rims ≤ 0,5 on the fixed rim ≤ 2 on the bottom	≤ 1 on the two free rims ≤ 0,5 on the two fixed rims ≤ 2 on the bottom	≤ 1 on the free rim ≤ 0,5 on the three fixed rims ≤ 2 on the bottom	≤ 0,5 on all rims ≤ 2 on the bottom
A.5.6	≤ 2 on the four free rims ≤ 3 on the bottom	≤ 2 on the three free rims ≤ 0,5 on the fixed rim ≤ 3 on the bottom	≤ 2 on the two free rims ≤ 0,5 on the two fixed rims ≤ 3 on the bottom	≤ 2 on the free rim ≤ 0,5 on the three fixed rims ≤ 3 on the bottom	≤ 0,5 on all rims ≤ 3 on the bottom
A.5.7	≤ 4 on the rim ≤ 0,3 residual	≤ 4 on the rim ≤ 0,3 residual	≤ 4 on the rim ≤ 0,3 residual	≤ 4 on the rim ≤ 0,3 residual	Not applicable
A.5.8	≤ 4 on the rim ≤ 0,3 residual	≤ 4 on the rim ≤ 0,3 residual	≤ 4 on the rim ≤ 0,3 residual	Not applicable	Not applicable

[a] Values in addition to any deflection of the test rig (see A.5.2).

[b] See a) to e) in A.5.3.

4.15 Bath rims

When a bath incorporating a nominally flat top surface of the rim is installed in accordance with the manufacturer's instructions, the rim shall not encourage water to drain away from the inside of the bath. Roll top rims and rims incorporating special features, e.g. headrests, are not subject to this requirement.

5 Marking

Baths shall be legibly marked with the following information:

a) reference to this European Standard (EN 198);

b) name or trademark of the manufacturer or supplier.

Annex A
(normative)

Bath test methods

A.1 Sequence of tests

The tests shall be carried out on one bath of each type in the sequence A.2, A.3, A.5, A.4 and A.6.

A.2 Geometric deviations

A.2.1 Test apparatus

A.2.1.1 **Length measuring device with an accuracy of 0,5 mm.**

A.2.1.2 **Reference plane surface with flatness tolerance of 0,5 mm.**

A.2.1.3 **Fixed square, fixed to the reference plane surface,** at least 25 mm deeper than the depth of the rim side to be measured, one arm at least 300 mm longer than the length to be measured and the other arm at least as long as the width to be measured.

A.2.1.4 **Movable square,** at least 25 mm deeper than the depth of the rim side to be measured, one side at least 300 mm long and the other side at least as long as the width to be measured.

A.2.1.5 **Thickness comparator or gauge** with an accuracy of ± 0,1 mm.

A.2.1.6 **Spacing rollers made of metallic materials,** at least 25 mm deeper than the depth of the rim side to be measured and with a diameter D_{sr} with a tolerance of ± 0,25 mm.

A.2.1.7 **Thickness wedge** with a thickness of $5\ ^{0}_{-0,1}$ mm.

A.2.2 Squaring

Place the bath upside down on the reference plane surface as shown in Figure A.4, compensating for any design features, e.g. headrests

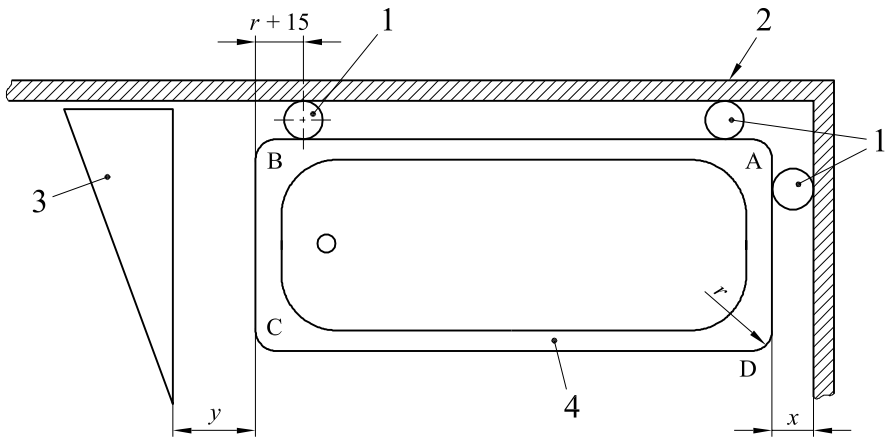
Position sides AB and AD adjacent to the fixed square and place three spacing rollers with diameter D_{sr} each in at a distance of r + 15 mm from the corners A and B, as shown in Figure A.1, where r is the radius of the corners. Measure the distance x as shown in Figure A.1 and calculate Δq as the difference $D_{sr} - x$.

Position the movable square along the side BC and place a fourth spacing roller at a distance of r + 15 mm from the corner B. Measure the distance y as shown in Figure A.1 and calculate Δq as the difference $D_{sr} - y$

Turn the bath through 180° and check the distances x and y at corners A and B respectively.

Record the deviation.

Dimensions in millimetres



Key

1 spacing rollers
2 fixed square
3 movable square
4 bath
r radius of corners
x distance between corner and fixed square
y distance between corner and moveable square

Figure A.1 - Squaring

A.2.3 Straightness of the rim side

Place the bath upside down on the reference plane surface as shown in Figure A.4, compensating for any design features, e.g. headrests

Position two spacing rollers with diameter D_{sr} between the rim side of the bath and one side of the fixed square, each at a distance of r + 15 mm from the corners, as shown in Figure A.2, where r is the radius of the corners of the bath.

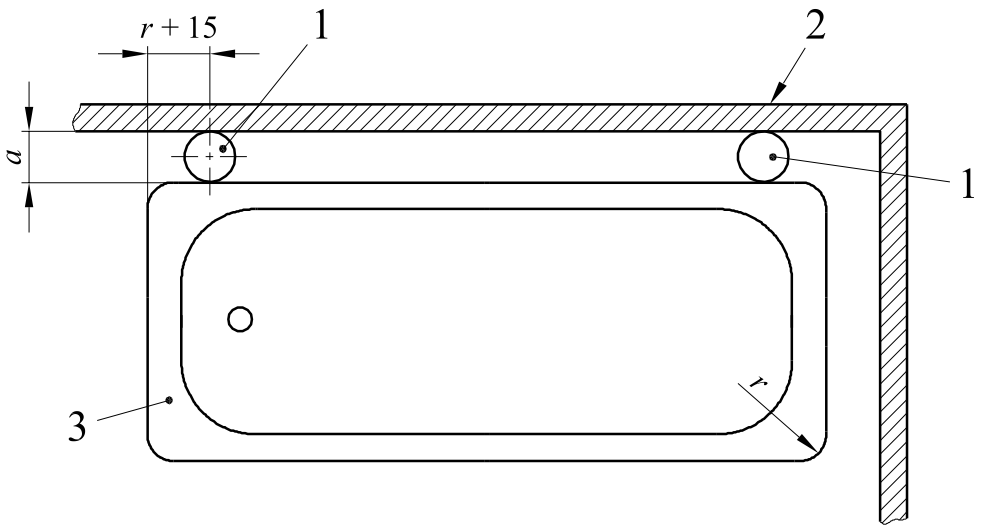
Measure the maximum and minimum distances a_{max} and a_{min} between the rim side and the fixed square using the thickness comparator or gauge.

Calculate the deviation Δs as the difference $a_{max} - a_{min}$.

Record the deviation.

Repeat the procedure for each rim of the bath.

Dimensions in millimetres



Key

1 spacing rollers
2 fixed square
3 bath
r radius of corners
a distance between the rim side and the fixed square

Figure A.2 - Straightness of the rim side

A.2.4 Straightness of the bottom edge of the rim

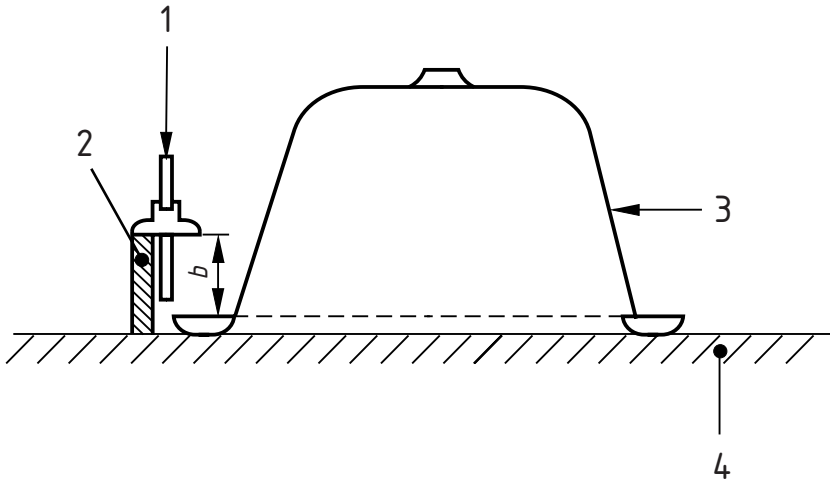
Place the bath upside down on the reference plane surface as shown in Figure A.4, compensating for any design features, e.g. headrests.

Position the bath against the fixed square as shown in Figure A.3.

Measure the maximum and minimum distances b_{max} and b_{min} between the bottom edge of the rim and the top surface of the fixed square using the thickness comparator or gauge.

Calculate the deviation Δr as the difference $b_{max} - b_{min}$.

Record the total deviation.



Key

1 thickness comparator or gauge
2 fixed square
3 bath
4 reference plane

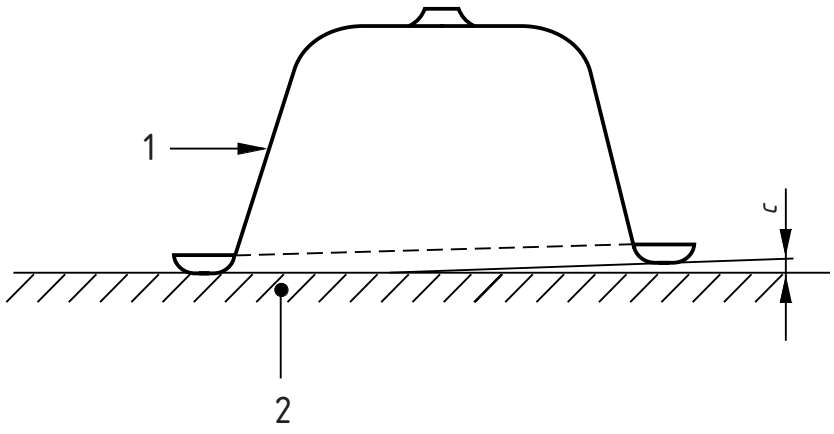
Figure A.3 - Straightness of the bottom edge of the rim

A.2.5 Flatness of the top surface of the rim

Place the bath upside down on the reference plane surface as shown in Figure A.4, compensating for any design features, e.g. headrests

Check, using the thickness wedge, the deviation *c* by inserting the thickness wedge between the reference plane and the top surface of the rim

Record the deviation.



Key

1 bath
2 reference plane
c deviation

Figure A.4 - Flatness of the top surface of the rim

A.3 Resistance to temperature change

A.3.1 Test apparatus

A.3.1.1 **Water supply capable of discharging cold and hot water** with temperatures, flow rates and volumes as defined in A.3.2.

A.3.1.2 **Pipe** with nominal diameter of 22 mm.

A.3.1.3 **Thermometer** with an accuracy of ±1 °C at the measured values.

A.3.1.4 **Flow meter** for measuring a flow rate of water at (0,32 ± 0,032) l/s.

A.3.1.5 **Dial gauge** with an accuracy of 0,1 mm.

A.3.2 Procedure

The bath is submitted successively to Tests A and B.

Test A

With the waste outlet open, discharge (50 ± 1) l of water through the 22 mm pipe positioned not more than 125 mm above the spillover level of the bath so that the water impinges on the side wall nearest to the waste outlet hole in a position where a supply fitting is likely to discharge. The water temperature at the outlet of the pipe shall be (90 ± 2) °C and the rate of flow into the bath shall be (0,32 ± 0,032) l/s.

Immediately afterwards, discharge (100 ± 2) l of water at (12 ± 3) °C at the same flow rate through the same pipe at the same position but with the waste outlet closed.

Leave the water in the bath for (10^{+1}_{0}) min after which the waste outlet is opened and the water allowed to drain away.

Test B

Position the dial gauge on the underside of the bath 60 mm from the axis of the waste outlet hole on one or the other side of the waste outlet hole on a line at 90° to the axis of the internal bathing area of the bath (see Figure A.5).

With the waste outlet closed, discharge water through the 22 mm pipe positioned not more than 125 mm above the spillover level of the bath so that the water impinges on the side wall nearest to the waste outlet hole in a position where a supply fitting is likely to discharge. The water shall fill the bath to a height not less than 250 mm above the waste outlet level. The water temperature at the outlet of the pipe shall be (75 ± 2) °C and the rate of flow into the bath shall be (0,32 ± 0,032) l/s.

Leave the water in the bath for (10^{+1}_{0}) min after which the waste outlet is opened and the water allowed to drain away.

Immediately afterwards, with the waste outlet closed, add the same volume of cold water with a temperature of (12 ±3) °C at the same flow rate through the same pipe in the same position.

Leave the water in the bath for (10^{+1}_{0}) min after which the waste outlet is opened and the water allowed to drain away.

Repeat this procedure 100 times without interruption.

Check any deflection shown by the dial gauge until constant values are reached and at least over the first 10 cycles. Record the maximum value.

After the last cycle apply to the surface of the bath, using a sponge or paint brush, a solution of eosine in water of concentration 100 g/l to which has been added 1 cm^3/l of liquid detergent. Leave for $(5\,^{+1}_{0})$ min, then remove the solution from the surface of the bath by cleaning with a damp cloth.

Visually examine the bath and record any adverse changes in appearance or presence of traces of the eosine solution.

Dimensions in millimetres

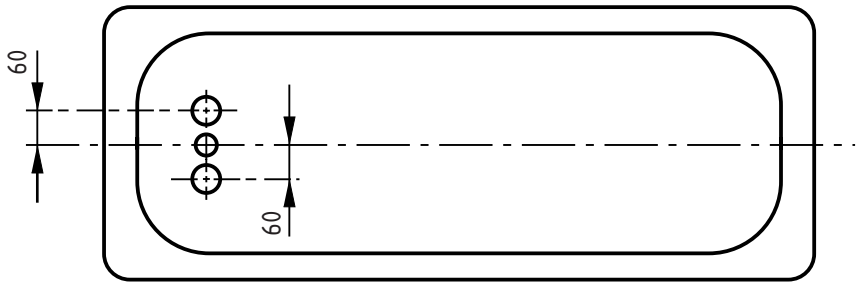


Figure A.5 - Position of the gauge

A.4 Resistance to impact

A.4.1 Test apparatus

A.4.1.1 Tubes with lengths of (750 ± 10) mm and (1000 ± 10) mm and an inner diameter of (55 ± 5) mm.

A.4.1.2 Ball made of stainless steel with a mass of (200 ± 5) g and a diameter of approximately 37 mm.

A.4.2 Procedure

The bath is submitted successively to Tests A and B.

Test A

Perform the test at the centre and at each end of the flat surface of the bottom of the bath.

Clamp the tube of 1 000 mm length vertically so that it is maintained 1 mm above the flat surface of the bottom of the bath.

Drop the ball through the tube onto the bottom of the bath.

Visually examine both the surface of the bottom of the bath and the underside of the bath.

Record any distortion or other defects that impair the appearance or functioning of the bath.

Test B

Clamp the tube of 750 mm length vertically so that it is maintained 1 mm above the flat surface of the rim of the bath.

Drop the ball through the tube onto the rim of the bath.

Repeat this test at two other points on the rim of the bath.

Visually examine both the surface and the underside of the rim of bath.

Record any distortion or other defects that impair the appearance or functioning of the bath.

A.5 Determination of rigidity

A.5.1 General

These tests are intended to simulate the effect of loads on different parts of the bath whilst the bath is in use.

Baths may be installed either free-standing or against one, two or three walls. They may be supported on dwarf walls or against one or more walls with the other sides supported by dwarf walls.

The test arrangements a) to e) (see A.5.3) decrease in severity.

Baths conforming with the requirements of Table 1 when tested under more onerous conditions, need not be tested again under less onerous conditions, e.g. a bath complying with the requirements in Table 1 when tested free-standing (installation method a)) does not have to be subjected to the less onerous tests described in installation methods b) to e) .

The tests are based on rectangular styled baths. Baths of other shapes shall be tested with the loads and dial gauges positioned at the nearest equivalent points.

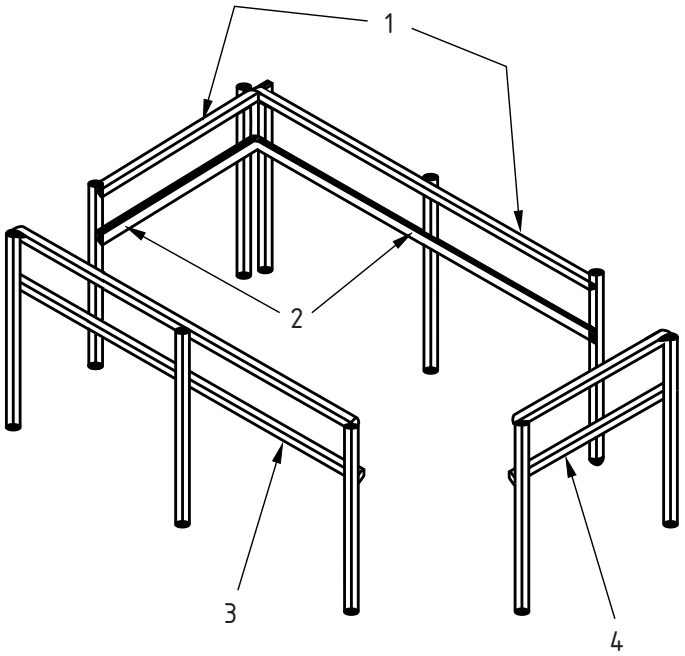
A.5.2 Test apparatus

A.5.2.1 Test rig.

An example of a suitable rig is shown in Figure A.6. The rig should be designed to minimize inherent deflection. The rig and the bath to be tested shall be mounted on a firm, flat horizontal surface. If preferred, solid vertical walls may be used.

A.5.2.2 **Either six reinforced cloth bags with approximate dimensions 500 mm x 200 mm,** filled with lead shot, iron shot or sand, of mass ($25\,^{+0,5}_{0}$) kg each **or twelve bags of the same dimensions** of ($12,5\,^{+0,25}_{0}$) kg each.

A.5.2.3 **Five dial gauges** capable of reading to an accuracy of 0,1 mm.



Key

1 fixed rigid frame
2 groove in bar for fixing clips
3 mobile rigid frame
4 mobile rigid frame

Figure A.6 - Example of test rig for deflection tests

A.5.3 Installation methods

Install the bath, in accordance with the manufacturer's instructions, as described in a) to e).

a) Free standing: Do not use any frames of the test rig or any solid walls (see Figure A.7).

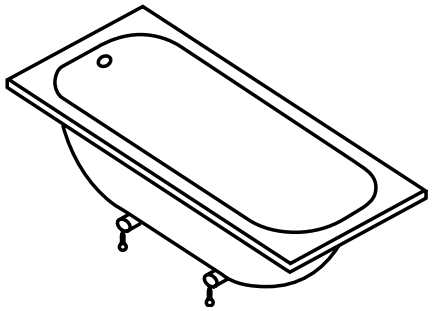


Figure A.7 - Installation method a)

b) Fixed to one wall: Use only one frame of the test rig or one solid wall; all free sides shall have no support other than that provided by the manufacturer (see Figure A.8).

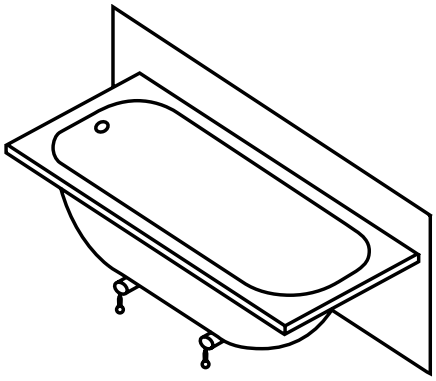


Figure A.8 - Installation method b)

c) Fixed to two walls: Use only two frames of the test rig or two solid walls; all free sides shall have no support other than that provided by the manufacturer (see Figure A.9).

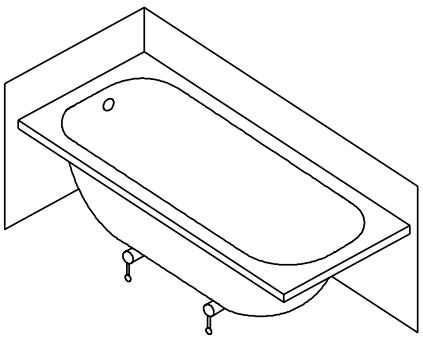


Figure A.9 - Installation method c)

d) Fixed to three walls: Use only three frames of the test rig or three solid walls; the free side shall have no support other than that provided by the manufacturer (see Figure A.10).

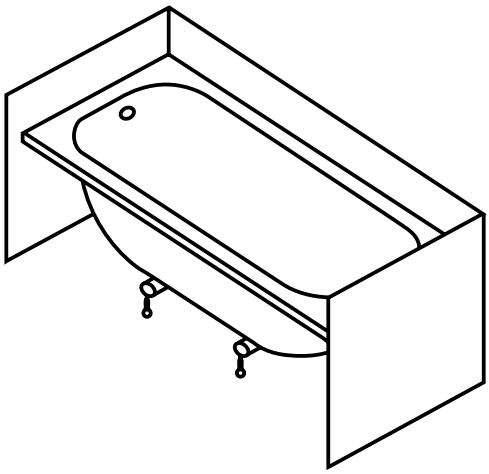


Figure A.10 - Installation method d)

e) Fixed on four dwarf walls or against one or more walls with the other sides supported by dwarf walls: Use all frames of the test rig or four solid walls (see Figure A.11).

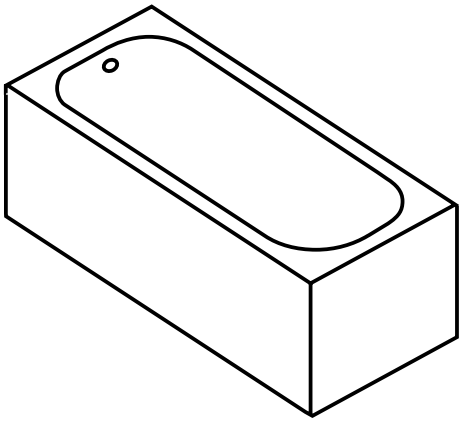


Figure A.11 - Installation method e)

A.5.4 Preloading

Before carrying out the deflection tests, load the bath as described in A.5.5. Leave for (30^{+1}_{0}) min, remove the bags, wait (15^{+1}_{0}) min, then carry out the tests specified in A.5.5 to A.5.8, allowing not less than 10 min between tests.

A.5.5 Deflection test 1 – Deflection of the rim and the bottom due to a load on the bottom

Install the bath in accordance with the manufacturer's instructions and set up dial gauges under the bath and on or under any unsupported side, at the necessary measuring points marked in Figure A.12.

Record the initial readings of the dial gauges.

Place the bags carefully along the bottom of the bath as shown in Figure A.12. If twelve bags are used they shall occupy the same surface area as the six bags.

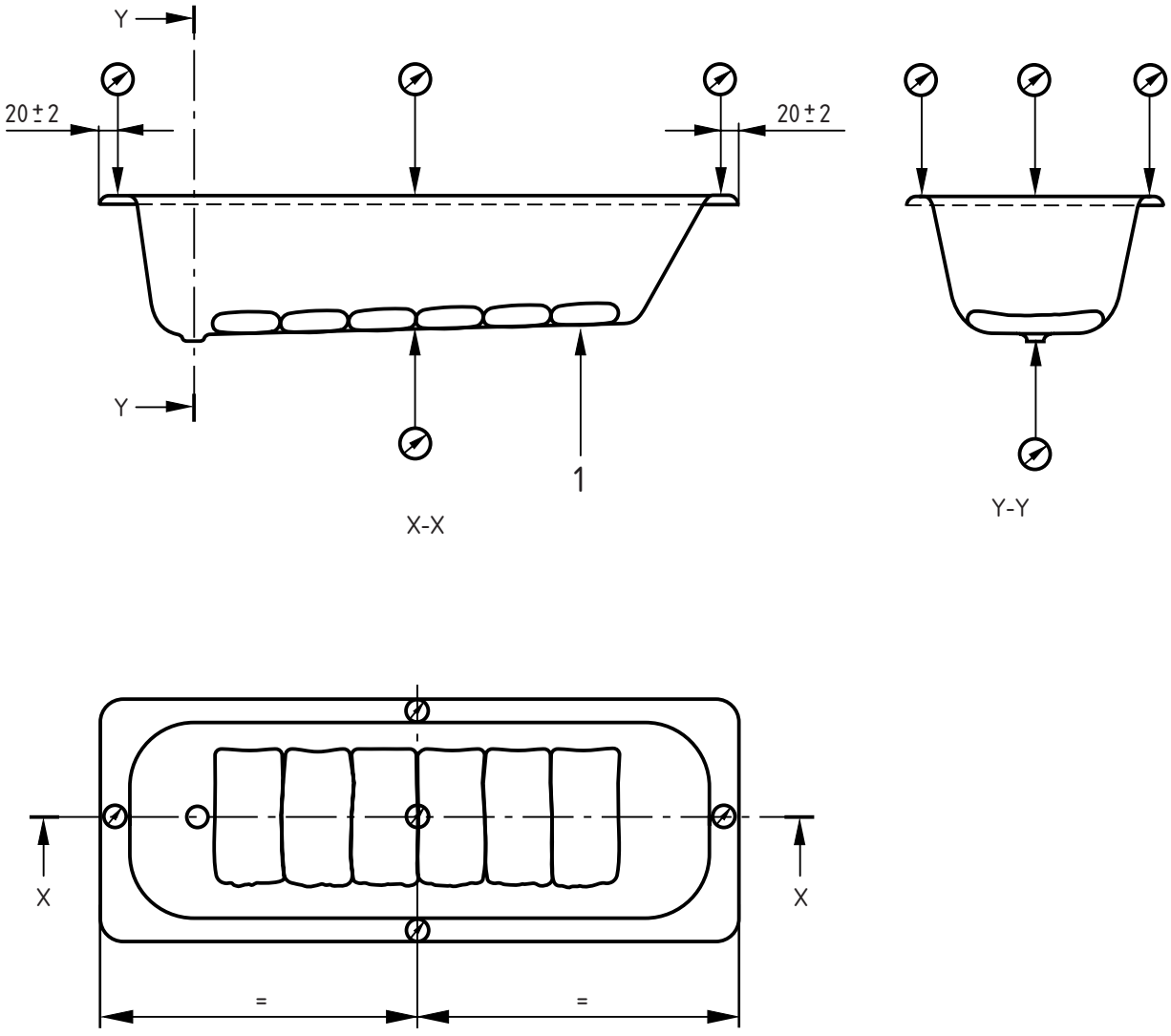
After ($5^{+0,5}_{0}$) min, note the final readings of the dial gauges.

Calculate the deflections of the rim and bottom of the bath as the differences between the final and initial readings of the dial gauges.

Record the deflections.

For baths where the design of the sides and/or support arrangements are not symmetrical and the bath can be installed the other way around, repeat the procedure with the opposing side adjacent to any wall.

Dimensions in millimetres



Key

1 bags

Figure A.12 - Deflection test 1 with dial gauges positioned for installation method a)

A.5.6 Deflection test 2 – Deflection of the bottom and rim due to a load on the bottom

Install the bath in accordance with the manufacturer's instructions and set up dial gauges under the bath and on or under any unsupported side, at the necessary measuring points marked in Figure A.13.

Record the initial readings of the dial gauges.

Place the bags carefully in a pile in the centre of the bottom of the bath so that the major axis of the bags coincides with the minor axis of the bottom as shown in Figure A.13. If twelve bags are used they shall occupy the same surface area as the six bags.

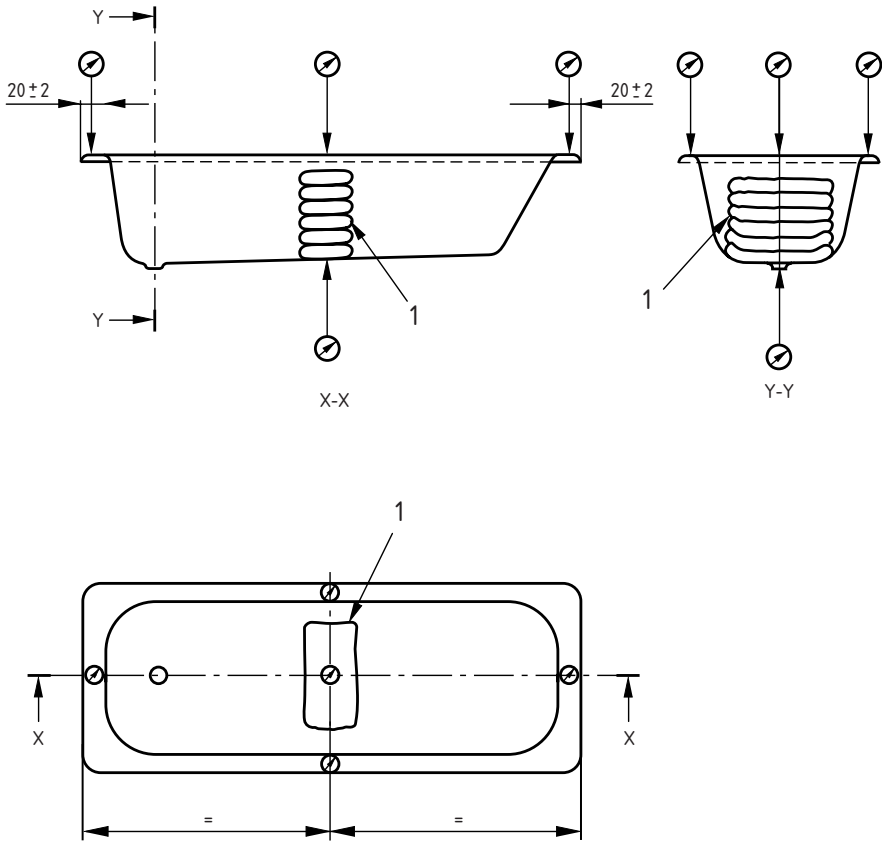
After $(5^{+0,5}_{0})$ min, note the final readings of the dial gauges.

Calculate the deflections of the rim and bottom of the bath as the differences between the final and initial readings of the dial gauges.

Record the deflections.

For baths where the design of the sides and/or support arrangements are not symmetrical and the bath can be installed the other way around, repeat the procedure with the opposing side adjacent to any wall.

Dimensions in millimetres



Key

1 bags

Figure A.13 - Deflection test 2 with dial gauges positioned for installation method a)

A.5.7 Deflection test 3 – Deflection of the rim due to a load on the long side of the rim

Install the bath in accordance with the manufacturer's instructions and set up a dial gauge under the rim at the measuring point marked in Figure A.14.

Record the initial reading of the dial gauge.

Place four bags carefully one on top of the other in the configuration shown in Figure A.14 on the unsupported side of the bath so that the major axis of each bag coincides with the longitudinal axis of the rim. If eight bags are used, they shall occupy the same surface area as the four bags.

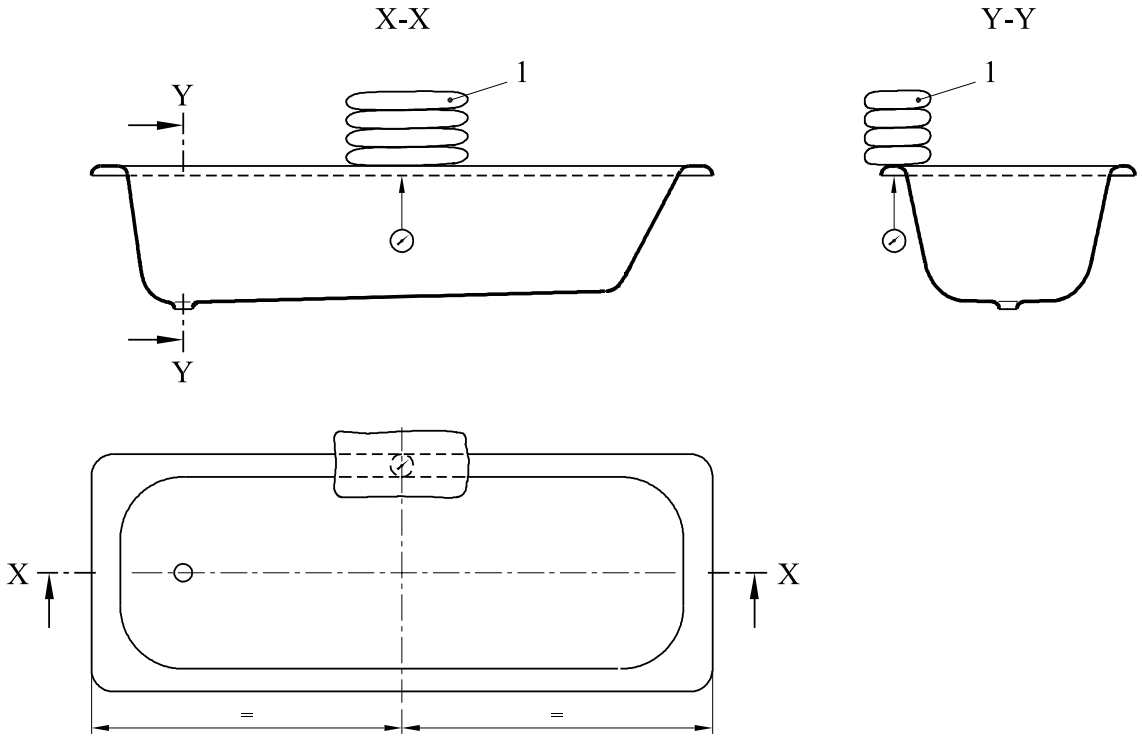
After $(5\,^{+0,5}_{0})$ min note the intermediate reading of the dial gauge.

Remove the bags, wait $(10\,^{+1}_{0})$ min and note the final reading of the dial gauge.

Calculate the deflection of the rim as the difference between the intermediate and initial readings of the dial gauge and the residual deflection as the difference between the final and initial readings of the dial gauge.

Record the deflections.

For baths where the design of the sides and/or support arrangements are not symmetrical and the bath can be installed the other way around, repeat the procedure with the opposing side adjacent to any wall.



Key

1 bags

Figure A.14 - Deflection test 3 with dial gauge positioned for installation method a)

A.5.8 Deflection test 4 – Deflection of the rim due to a load on the end of the bath

Install the bath in accordance with the manufacturer's instructions and set up a dial gauge under the rim at the measuring point marked in Figure A.15.

Record the initial reading of the dial gauge.

Place four bags carefully one on top of the other in the configuration shown in Figure A.15 so that the major axis of each bag coincides with the longitudinal axis of the rim. If eight bags are used they shall occupy the same surface area as the four bags.

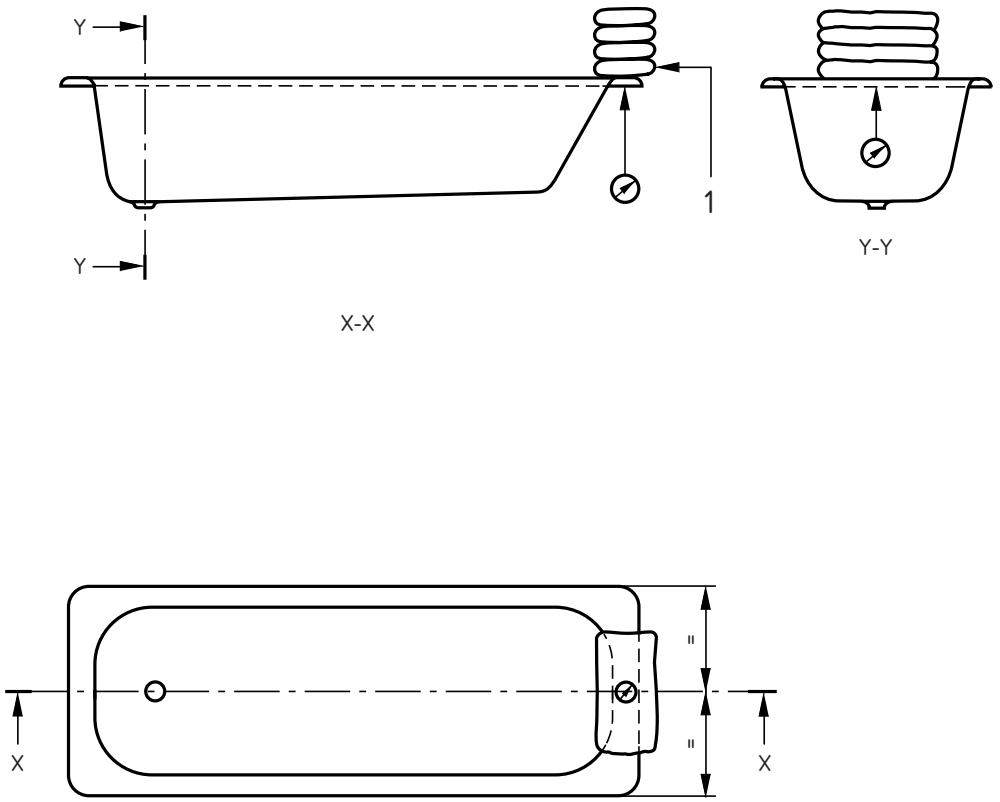
After $(5\,^{+0,5}_{0})$ min note the intermediate reading of the dial gauge.

Remove the bags, wait $(10\,^{+1}_{0})$ min and note the final reading of the dial gauge.

Calculate the deflections of the rim as the difference between the intermediate and initial reading of the dial gauge and the residual deflection as the difference between the final and initial reading of the dial gauge.

Record the deflections.

For baths where the design of the sides and/or support arrangements are not symmetrical and the bath can be installed the other way around, repeat the procedure with the opposing side adjacent to any wall.



Key

1 bags

Figure A.15 - Deflection test 4 with dial gauge positioned for installation method a)

A.6 Handgrip tests

A.6.1 General

If not pre-fitted, install the handgrip(s) in accordance with the manufacturer's instructions. The bath shall be installed in accordance with the manufacturer's instructions (see A.5.3).

A.6.2 Test apparatus

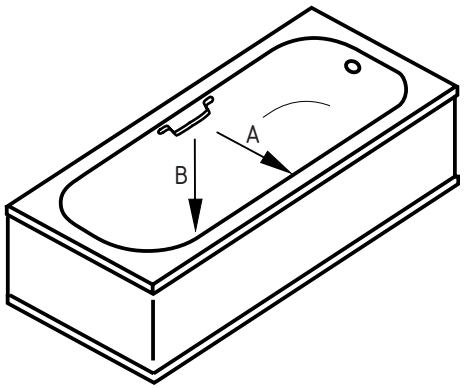
A.6.2.1 Suitable means to apply the test force of (500 ± 5) N.

A.6.3 Procedure

1) Apply the test force horizontally in the centre of the handgrip in direction A for (5 ± 1) min (see Figure A.16).

2) Apply the test force vertically downwards in the centre of the handgrip in direction B for (5 ± 1) min (see Figure A.16).

After each application of the force, visually check the bath and handgrip and record any distortion or other defects that impair the appearance or functioning of the bath or handgrip.



Key

A force applied horizontally

B force applied vertically downwards

Figure A.16 - Direction of forces for handgrip test

Annex B
(informative)

Identification of technical change from EN 198:1987

B.1 General

This Annex lists the clauses with technical changes made to EN 198 since its first publication in 1987 and gives a brief description of that change.

For detailed information regarding the changes, direct comparison between the two versions will be necessary.

B.2 Clauses that were in EN 198:1987 but are not in the revised EN 198

B.2.1 Clause 2, General, EN 198:1987

This clause has been removed and the requirements moved to Clause 4 of the revised EN 198.

B.2.2 Clause 3, Permitted deviations, EN 198:1987

This clause has been removed, with deviations and tolerances now included in the relevant clause of the revised EN 198.

B.3 List of Clauses with significant technical change from EN 198:1987

B.3.1 General comment

The standard has been updated to reflect current CEN rules for drafting and the drawing of figures.

B.3.2 Scope

The Scope has been simplified and any exclusions removed.

B.3.3 Clause 2, Normative references

This clause has been added in accordance with CEN Internal Regulations, Part 3

B.3.4 Clause 3, Terms and definitions

This clause has been added in accordance with CEN Internal Regulations, Part 3

B.3.5 Clause 4, Requirements

All the requirements for baths are now included in Clause 4.

Reference to EN 263, *Sanitary appliances – Crosslinked cast acrylic sheets for baths and shower trays for domestic purposes,* added.

Reference to EN 232, *Baths – Connecting dimensions*, added to requirements for waste outlet hole, overflow hole and bath-mounted tapware.

B.3.6 Annex A

Sequence of testing added.

The determination of the resistance of the bath to domestic chemicals and stains has been removed as it is covered in EN 263, the standard for the sheet material.

The handgrip tests have been updated to better reflect 'in-use' conditions.

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