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Sanitetsenheter – Duschkar tillverkade av gjutna akrylskivor – Krav och provningsmetoder

Sanitary appliances – Shower trays made from crosslinked cast acrylic sheets – Requirements and test methods

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The European Standard EN 249:2010 has the status of a Swedish Standard. This document contains the official English version of EN 249:2010.

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00.
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EUROPEAN STANDARD
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EN 249

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English Version

Sanitary appliances - Shower trays made from crosslinked cast acrylic sheets - Requirements and test methods

Appareils sanitaires - Receveurs de douche en feuilles d'acrylique réticulées coulées - Prescriptions et méthodes d'essai

Sanitärausstattungsgegenstände - Duschwannen, hergestellt aus vernetzten gegossenen Acrylplatten - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 14 February 2010.

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Foreword

This document (EN 249:2010) 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of an identical text or by endorsement, at the latest by September 2010, and conflicting national standards shall be withdrawn at the latest by September 2010.

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1 Scope

This European Standard specifies the requirements for shower trays for domestic purposes made from crosslinked cast acrylic sheet conforming with 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 standard is applicable to all sizes and shapes of shower trays.

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 251, *Shower trays — 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 shower tray.

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

4.2 Material

The shower tray shall be manufactured from crosslinked cast acrylic sheet complying with EN 263.

4.3 Surface appearance

When the shower tray 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., that will impair the appearance or performance of the shower tray.

4.4 Waste outlet hole

The shower tray 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 251 or the manufacturer shall supply or recommend a suitable waste outlet fitting.

4.5 Overflow hole

When the shower tray 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 251 or the manufacturer shall supply or recommend a suitable overflow fitting.

4.6 Hole edges

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

4.7 Dimensional deviations

The dimensions of shower trays shall not deviate from the size quoted by the manufacturer by greater than ± 5 mm.

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

For round shower trays, length and width correspond to the diameter.

4.8 Geometric deviations

4.8.1 General

The straight sides or edges of the shower tray that might abut independent surroundings or supporting structures shall comply with the requirements of 4.8.2 to 4.8.4 and all shower trays shall comply with 4.8.5.

NOTE These requirements are not applicable to sides or edges that are purposedly designed as curves or slopes.

4.8.2 Squaring

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

4.8.3 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.

4.8.4 Straightness of the bottom edge of the rim

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

4.8.5 Flatness of the top surface of 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.

4.9 Bottom of the shower tray

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

4.10 Resistance to temperature changes

When tested in accordance with A.3 the shower tray shall show no evidence of distortion or other defects which will impair the appearance or functioning of the shower tray and any deflection shall be less than or equal to 4 mm.

4.11 Resistance to impact

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

4.12 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	Deflection under load [a] mm	Residual deflection [a] mm
A.5.4	2	0,3
A.5.5	4	0,3
[a] Values in addition to any deflection of the test rig (see A.5.2).		

4.13 Rim

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

5 Marking

Every shower tray shall be legibly marked on the underside with the following information:

a) reference to this European Standard (EN 249);

b) name or trademark of the manufacturer or supplier.

Annex A
(normative)

Shower tray test methods

A.1 Sequence of tests

The tests shall be carried out on one shower tray of each type in sequence A.2 − A.3 − A.5 − A.4.

A.2 Geometric deviations

A.2.1 Test apparatus

a) Length measuring device with an accuracy of 0,5 mm.

b) Reference plane surface with flatness tolerance of 0,5 mm.

c) 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.

d) 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.

e) Thickness comparator or gauge with an accuracy of ± 0,1 mm.

f) Spacing rollers made of metallic material, 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.

g) Thickness wedge with a thickness of $5^{\ 0}_{-0,1}$ mm.

A.2.2 Squaring

Place the shower tray upside down on the reference plane surface as shown in Figure A.4.

Position sides AB and AD adjacent to the fixed square and place three spacing rollers with diameter D_{sr} each 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 shower tray through 180° and check the distances x and y at corners A and B respectively.

Record the deviation.