

**SANITARY APPLIANCES****Technical document 017-19**

Slip resistance of shower trays

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## MODIFICATION HISTORY

<b>Revision no.</b>	<b>Application date</b>	<b>Modifications</b>
00	21/12/2018	Update to the document layout and reference
01	22/01/2024	Update of the document following the cancellation of the standard XP CEN/TS 16165 (December 2016) : Determination of slip resistance of pedestrian surfaces - Methods of evaluation. Cancellation date: 01/12/2021 Application of the standard in force: NF EN 16165 (October 2021) : Determination of slip resistance of pedestrian surfaces - Methods of evaluation.

# Contents

1	SLIP RESISTANCE TEST.....	5
1.1	Test model.....	5
1.2	Test procedure .....	5
1.3	Expression of the results .....	5
1.4	Slip resistance ranking, PN.....	6
2	DURABILITY OF SLIP-RESISTANT SHOWER TRAYS.....	6
3	CLEANABILITY OF A SLIP-RESISTANT SHOWER TRAY .....	6
4	MONITORING THE SLIP RESISTANCE CLASS .....	7

Shower trays shall comply with the standards that apply to them:

- NF EN 14527
- NF EN 251
- NF EN 15720
- NF D 11-124
- NF D 14-601
- NF EN 249

And with the additional specifications in the following documents:

- technical document 017-10
- technical document 017-20

They must be class 1 according to Standard NF EN 14527.

## 1 SLIP RESISTANCE TEST

The test is carried out using the inclined plane method (barefoot) as described in Appendix A of Standard NF EN 16165 (October 2021).

The following requirements apply to the test method:

### 1.1 Test model

The model to be tested must be cut out of a shower tray and must have a test surface of:

- Width:  $450 \pm 50$ mm
- Length:  $1300 \pm 500$ mm (this must be a usable length with no plughole and no rim)

The minimum dimensions required are therefore 400x1000mm for COFRAC accredited tests.

If these dimensions are not possible for technical reasons (dimensions too small, central plughole), other dimensions can be accepted but the test cannot be carried out under COFRAC accreditation. In this case, the minimum dimensions required to carry out the test under sufficiently acceptable conditions are 350 mm x 800 mm.

Before carrying out the test, the test surface must be cleaned and rinsed with the test solution used in the NF EN 16165.

### 1.2 Test procedure

The test is carried out and utilized in accordance with standard NF EN 16165 Annex A §A.5 and §A.6.

### 1.3 Expression of the result

The result is expressed in accordance with standard NF EN 16165 Annex A §A.7.

## 1.4 Slip resistance ranking, PN

The standard NF P 05-011 specifies a slip ranking for floors in rooms depending on their slip resistance. In this standard, the requirements for slip resistance ranking, barefoot, are as follows:

Class Barefoot	Requirements
PN 6	$6 \leq \alpha_{\text{barefoot}} < 12^\circ$
PN 12	$12 \leq \alpha_{\text{barefoot}} < 18^\circ$
PN 18	$18 \leq \alpha_{\text{barefoot}} < 24^\circ$
PN 24	$\alpha_{\text{barefoot}} \geq 24^\circ$

This ranking is taken and applied to finished shower trays in order to give them a PN ranking.

## 2 DURABILITY OF SLIP-RESISTANT SHOWER TRAYS

Durability is verified only when the shower tray is admitted by carrying out the slip resistance test before and after a thermal shock test.

The thermal shock test is carried out:

- According to the standard, NF D 14-503 for enamel shower trays
- According to technical document 017-10 §2.3 for shower trays made of acrylic and synthetic material
- According to technical document 017-20 §2.4 for shower trays made of impact-modified co-extruded ABS/acrylic sheets.

The thermal shock test is carried out on an uncut shower tray (model identical to the cut shower tray that was tested to determine slip resistance). After the test, the shower tray is cut and then tested in accordance with the paragraph 1.

The slip resistance class used is the lowest value obtained after the series of tests.

## 3 CLEANABILITY OF A SLIP-RESISTANT SHOWER TRAY

If the color has not already been assessed in this present NF certification, cleanability is verified by testing resistance to chemical products and stains on the shower tray for which a slip resistance class is being sought ("treated", new shower tray).

The test will be carried out according to Standard NF EN 14527 §5.3.3.

For enamel shower trays, the test will also be carried out according to Standards NF D 14-506, NF D 14-507 and NF D 14-508.

## 4 MONITORING THE SLIP RESISTANCE CLASS

A slip resistance test will be carried out during annual follow-up on a new shower tray. Two samples taken from the shower tray must be sent.

The 2<sup>nd</sup> sample will be used if the slip class obtained is different from the one declared at admission.

A series of slip resistance/thermal shock tests can be carried out upon request from the NF committee, if necessary.