

TOILET SEATS**Technical document 240-01**

Technical specifications complementary to
Standard NF D12-207

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MODIFICATION HISTORY

Revision No.	Application date	Modifications
00	21/12/2018	New technical document

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1 Specific provisions and further details regarding Standard NF D12-207

Paragraph 1: Field of application – Defining the mass of a toilet seat

The mass of a toilet seat includes:

- The seat,
- The lid, excluding the hinges, screws and frame.

The mass of a toilet seat shall be at least 1.0 kg without a lid and 1.2.0 kg with a lid.

Paragraph 6.3.1 Load tests (static loads)

After the tests defined in A.3.2.2, the toilet seat must not show any breakage, cracking, or residual deformation that exceeds 1+ mm, measured after 15 minutes of relaxation.

Paragraph 6.4.1: Nut tightening torque

The results of this test shall be satisfactory for a tightening torque of at least 2.0 Nm.

Paragraph 7.2.2: Mechanical durability of soft-close seats

In the case of a removable “soft-close” seat, a hot-water resistance test must first be performed, with the seat then brought back to room temperature before the remaining tests are performed.

Paragraph 7.3: Resistance to humidity

The paragraph is modified as follows: “Following the test described in A.4.2, the seat shall not show any cracking or swelling and the pads shall remain in place.”

Paragraph A.3.1: Flatness measurement

The test procedure is completed as follows:

“Fit the seat + lid set, hinges included, on the reference surface. In the event of a seat with more than 2 pads, make sure that the “back” pads are more than 1 mm away from the reference surface. The height may be adjusted but this has to be mentioned in the installation instructions”.

Paragraph A.3.2.2: Dynamic load

Replace “a foam plate at least 2.5 cm in thickness” with “a foam plate whose thickness is equal to 25_{-5}^0 mm.”

Foam pellets with a density of $100 \text{ kg/m}^3 \pm 10\%$ are accepted for the performance of the test.

The reference standards are:

- NF EN ISO 845 for determining the density,
- NF EN ISO 1923 for determining the linear dimensions.

Paragraph A.4.1: Determining resistance to chemicals and staining

The manufacturer shall indicate the opening date on the packaging of its product and shall not keep it more than 6 months after opening.

Paragraph A.4.2: Resistance to humidity

The temperature must be at least 50.0°C and the relative humidity must be at least 95.0%.

2 Complementary technical specifications

In addition to the requirements set out in Standard NF D12-207 and the previous paragraphs, the products must meet the additional specifications defined below:

2.1 Dimensional characteristics of standard seat shapes

The standard seats are single or double seats that can be adapted to a toilet bowl compliant with Standard NF D12-101 and which cover the inside of the toilet bowl flange.

A standard seat must match one of the four flange shapes given below (figures 1 to 4) and comply with the stipulated dimensions. These shapes were defined after studying the different toilet bowl shapes sold on the French market.

Any seat that does not match any of these 4 shapes is said to be "specific". Specific seats are single or double seats intended for particular toilet bowls. Seats for children's toilet bowls are therefore specific seats.

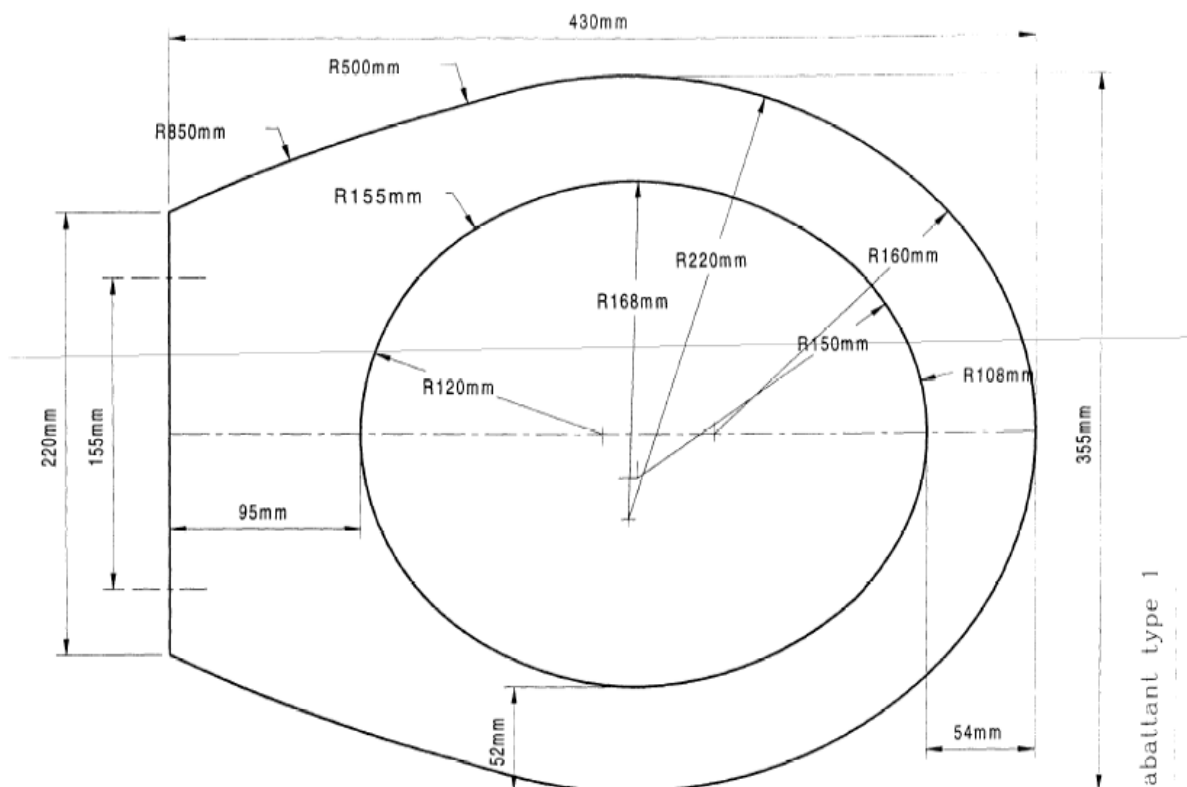


Figure 1. Seat type 1

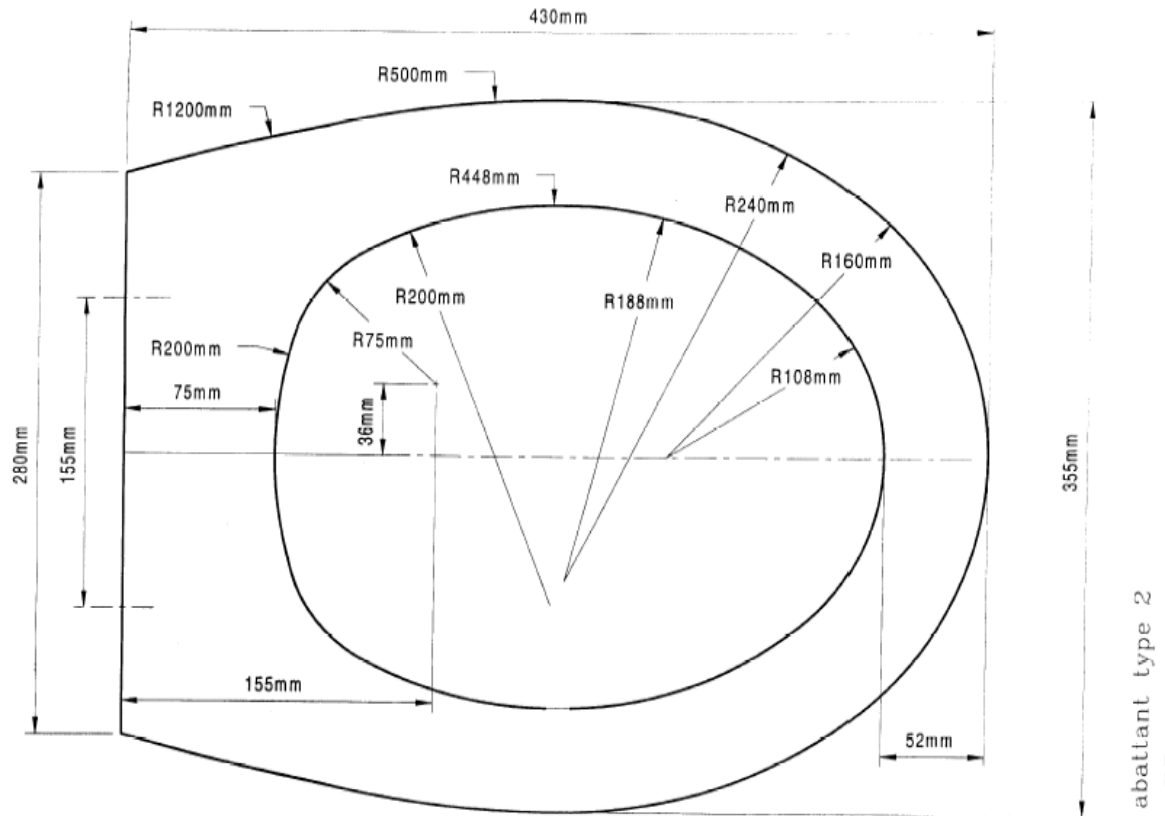


Figure 2. Seat type 2

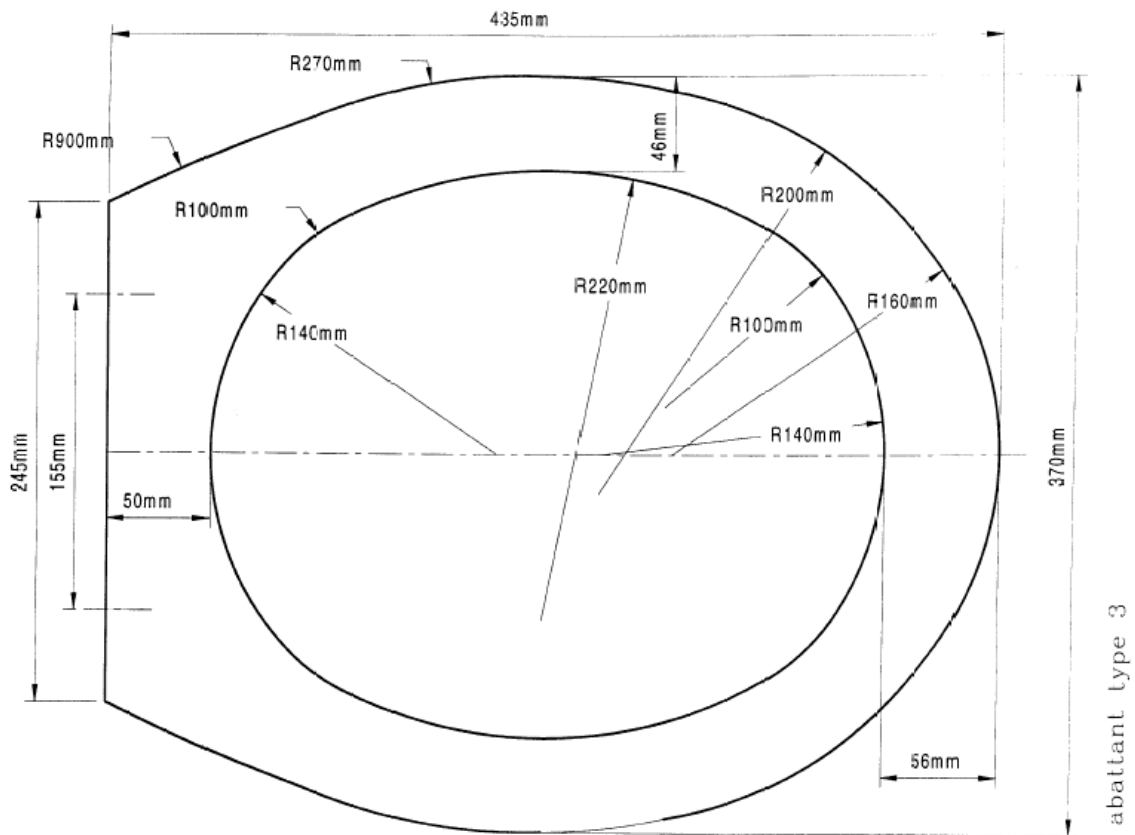


Figure 3. Seat type 3

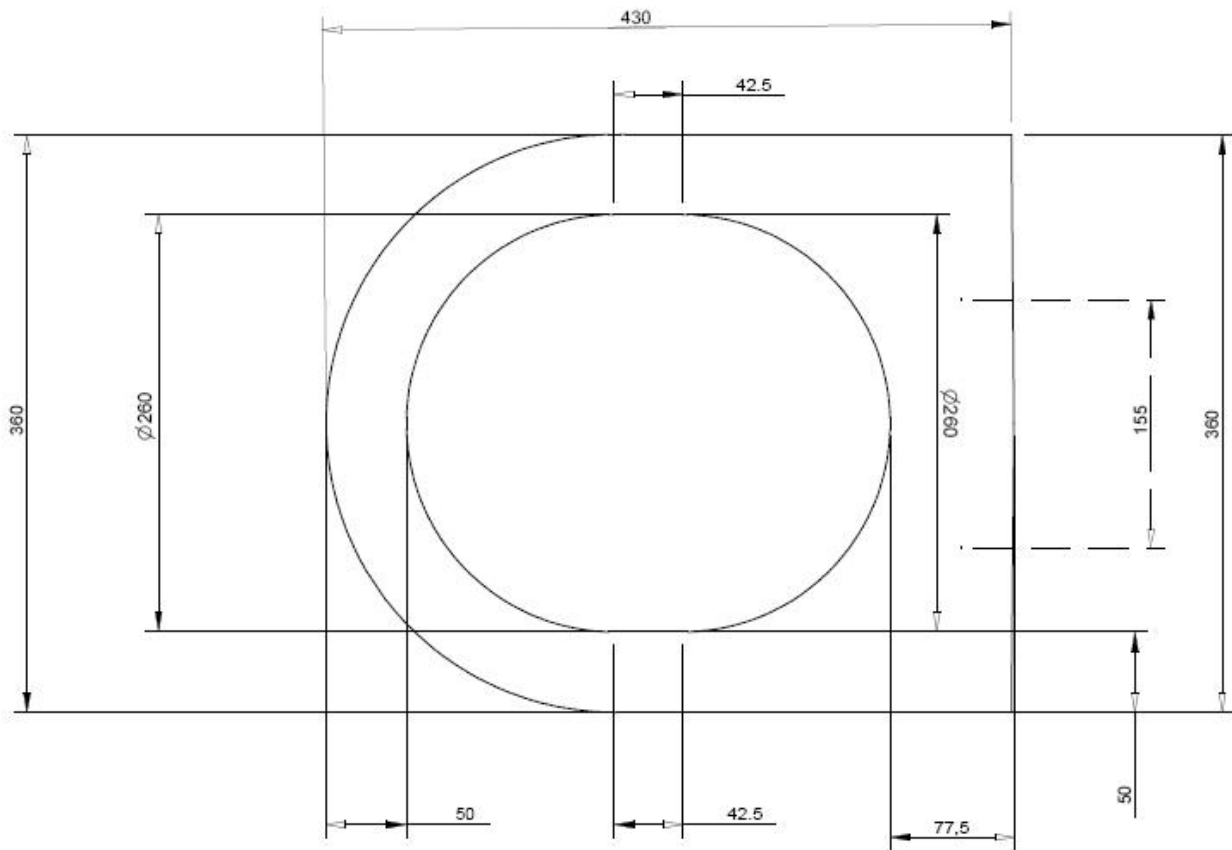


Figure 4. Seat type 4

2.2 Definition of colour ranges

A colour classification has been established based on brightness index (as per the table below) and appearance (glossy or matt).

Colour	Brightness index	
	CIE system (Y)	Hunter system (L)
Light	≥ 37	≥ 60.8
Medium	≥ 7 and < 37	≥ 26.5 and < 60.8
Dark	< 7	< 26.5

6 colour ranges are therefore considered:

Glossy: light, average, dark

Matt: light, average, dark

2.3 Colour classification of seats made from thermosetting synthetic materials

After the test of resistance to chemicals and staining described in A.4.1, an observation is made as follows on seats made from thermosetting synthetic materials in order to classify them.

Observation after tests of resistance to chemical products and staining

The toilet seats are observed with the naked eye from a distance of around 55 cm, in natural light (daylight from above and/or from an angle, avoiding direct sunlight), or an artificial light from a local source with a minimum intensity of 1,500 Lux. The seat is held manually and its surface is angled in all directions in relation to the light source.

Expression of results

The effect observed on the surface of the seat shall be expressed using the following scale for each of the 4 test reactants:

- Degree 1: No visible change;
- Degree 2: Slight change in brilliance and/or colour, only visible from certain angles;
- Degree 3: Change in brilliance and/or colour always visible from all angles;
- Degree 4: Degradation;

The final classification of the seat will be whichever index is considered to be the highest.

User information

The information provided to the consumer will vary as follows, according to the classification obtained:

- Degree 1: No information;
- Degrees 2 and 3: Information to consumers. The following sentence will be added to the information label: "This product may be affected by cleaning products."
- Degree 4: Unacceptable degradation.