

## TEST REPORT TRANSLATION

CUSTOMER: **ENEA EREDU S.COOP.**

PERSON REQUESTING THE TEST: **IÑAKI ELIZEGI**

ADDRESS: **APARTADO 97  
20250 LEGORRETA (GIPUZKOA)**

MATERIAL TESTED: **«OH» SERIES CHAIR**  
PURPOSE OF THE REQUEST: **TESTS IN ACCORDANCE WITH UNE-EN  
15373:2007**

DATE OF RECEIPT: **22.06.2009**  
TEST STARTING DATE: **25.06.2009**  
TEST COMPLETION DATE: **28.09.2009**  
DATE REPORT ISSUED: **02.11.2009**

The results included in this report only refer to the material received and subjected to testing in this Research Centre on the dates indicated.

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(\*) These tests remain out of the scope of accreditation of ENAC for tests on furnishing.



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## FEATURES OF THE SAMPLE

On the 22<sup>nd</sup> of June 2009, CIDEMCO received one chair of the «OH» series from the company **ENEA EREDU S.COOP.**, with the following features:



Sleigh base chair without armrests

## TESTS REQUESTED

The tests requested are those set out in the UNE-EN 15373:2007 standard: "Furniture. - strength, durability and safety - requirements for non-domestic seating." The test level requested has been 3, which corresponds to severe use.

The tests have been divided according to the type of chair and relevant regulations, and are as follows:

**1. Safety requirements<sup>(\*)</sup>**, in accordance with UNE-EN 15373:2007

**2. Stability tests**, in accordance with UNE-EN 1022:2005

2.1. Forward overturn (sec. 6.2)

2.2. Lateral overturn, for chairs without armrests (sec. 6.5)

2.3. Backward overturn, for chairs with back (sec. 6.6)

**3. Static load tests**, in accordance with UNE-EN 1728:2001

3.1. Static load on seat and back (sec. 6.2.1)

3.2. Static load on the front edge of the seat (sec. 6.2.2)

3.3. Vertical static load on back (Annex A.2, UNE-EN 15373:2007)

**4. Durability tests**, in accordance with UNE-EN 1728:2001

4.1. Combined fatigue test on seat and back (sec. 6.7)

4.2. Fatigue on the front edge of the seat (sec. 6.8)

**5. Tests on legs**, in accordance with UNE-EN 1728:2001

5.1. Static load on front legs (sec. 6.12)

5.2. Lateral static load (sec. 6.13)

**6. Impact tests**, in accordance with UNE-EN 1728:2001

6.1. Impact on seat (sec. 6.15)

6.2. Impact on back (sec. 6.16)

(\*) These tests remain out of the scope of accreditation

## TESTS CARRIED OUT AND RESULTS

### 1.-SAFETY REQUIREMENTS (\*)

The test was carried out in accordance with UNE-EN 15373:2007 «*Furniture. Strength, durability and safety-Requirements for non-domestic seating*» and the requirements to be checked, in a visual and tactile way, are the following:

- Edges of the seat, back rest and arm rests which are in contact with the user when sitting in the sitting are rounded or chamfered and all other edges accessible during use are free from burrs and/or sharp edges.
- Ends of hollow components are closed or capped.
- It shall not be possible for any load bearing part of the seating to come loose unintentionally.
- All parts that are lubricated to assist sliding shall be designed to protect users from lubricant stains when in normal use.

**RESULT: SATISFACTORY**

### 2. STABILITY DURING USE

The test was carried out in accordance with the UNE-EN 1022:2005 standard: «*Domestic Furniture. Seats. Determination of Stability*»

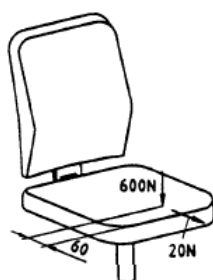
The chair should not tilt under the following conditions:

- a) When pressing the front edge of the surface of the chair in the most adverse position
- b) When leaning back on an armrest
- c) When leaning on the back
- d) When the user sits on the front edge of the seat.

**RESULT: SATISFACTORY**

**2.1. Forward overturn test (sec. 6.2),** in accordance with the UNE-EN 1022:2005 standard

A vertical force of 600 N is applied 60 mm from the front edge, at the point that is most susceptible to fault, and a forward horizontal traction force of 20 N is applied for at least 5 seconds.

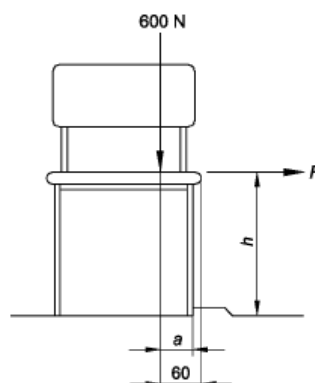


**RESULT: SATISFACTORY**

**2.3. Lateral overturn test. Chairs without armrests (sec. 6.5),** in accordance with the UNE-EN 1022:2005 standard

A vertical force of 600 N is applied on the seat on those points 60 mm from the edge of the structure towards the side of the locked feet, in its most adverse position.

A horizontal force of 20 N is applied towards the outside of the chair for a minimum duration of 5 seconds.



**RESULT: SATISFACTORY**

**1.4. Backward overturn test. Chairs with back (sec. 6.6)**, in accordance with the UNE-EN 1022:2005 standard

The test involves applying a vertical force of 600 N on the load point of the seat and another of 80 N at the load point of the back.

The chair does not tend to overturn during the application of the above forces.

**RESULT: SATISFACTORY**

## **2. STATIC LOAD TESTS**

The tests were carried out in accordance with the UNE-EN 1728:2001 standard: «*Domestic furniture. Seats. Test methods for the determination of Strength and Durability*»

**2.1. Static load test on seat and back (sec. 6.2.1)**, in accordance with the UNE-EN 1728:2001 standard

After immobilizing the chair with stops on the back part of the base, a force of 2000 N is applied on the seat and another of 700 N on the back. 10 cycles are completed in this way.

No damage was caused to the chair as a consequence of the tests, and it continued functioning properly.

**RESULT: SATISFACTORY**

**2.2. Static load test on the front edge of the seat (sec. 6.2.2)**, in accordance with the UNE-EN 1728:2001 standard

After immobilizing the chair with stops on the back part of the base, a force of 2000 N is applied 80 mm from the front edge, on the front axis. 10 cycles are completed in this way.

No warping is noted as a consequence of the tests.

**RESULT: SATISFACTORY**

**2.3. Vertical static load on back** , Annex A.2, in accordance with UNE-EN 15373:2007

A vertical load of 900 N is applied on the top of the back and another one of 1800 N is applied on the seat. The loads are maintained for 10 s.

No warping is noted as a consequence of the test.

**RESULT: SATISFACTORY**

**3. DURABILITY TESTS****3.1. Combined fatigue test on seat and back (sec. 6.7)**, in accordance with the UNE-EN 1728:2001 standard

A vertical load of 1000 N is applied at the load point of the seat while at the same time applying another horizontal force of 300 N at the load point of the back.. Both loads are then removed – first that of the back and then that of the seat – and the process is repeated for 200,000 cycles.

No warping was noted following the test.

**RESULT: SATISFACTORY**

**3.2. Fatigue test on the front edge of the seat (sec. 6.8)** , in accordance with the UNE-EN 1728:2001 standard

The test involves applying two vertical loads of 1000 N, alternating between two points located 80 mm from the front edge of the seat and as close as possible to the lateral edges, albeit at a distance of over 80 mm from the aforementioned edges. 100,000 cycles are completed in this way.

No warping was noted following the test.

**RESULT: SATISFACTORY**

## 4. TESTS ON THE LEGS

### 4.1. Static load test on front legs (sec. 6.12), in accordance with the UNE-EN 1728:2001 standard

Once the chair has been immobilized by stops on the front feet and after placing a load of 1000 N on the seat, a horizontal force of 500 N is applied at the midpoint of the back edge of the seat towards it. This force is applied 10 times.

No warping was noted following the test.

**RESULT: SATISFACTORY**

### 4.2. Lateral static load test (sec. 6.13), in accordance with the UNE-EN 1728:2001 standard

Once the chair has been immobilized by stops on the feet of one side and after placing a load of 1000 N on the seat, a horizontal load of 400 N is applied on the opposite side of the seat to the stops, at a point no more than 150 mm from the edge. This force is applied 10 times.

No warping was noted following the test.

**RESULT: SATISFACTORY**

## 5. IMPACT TESTS

### 5.1. Impact test on seat (sec. 6.15), in accordance with the UNE-EN 1728:2001 standard

The test involves placing a piece of foam on the seat at the load point, and dropping an impactor from a height of 240 mm 10 times.

No warping was noted following the test.

**RESULT: SATISFACTORY**



**5.2. Impact test on back (sec. 6.16)**, in accordance with the UNE-EN 1728:2001 standard

The test involves placing the chair with its front feet attached to stops to prevent forward movement. The upper part of the back is hit in the centre 10 times with an impact hammer. The hammer is dropped from a height of 330 mm at the following positions on the back:

**RESULT: SATISFACTORY**