



# CIDEMCO

TECHNOLOGICAL RESEARCH CENTRE

Bº Lasao, Area Anardi n° 5  
Apartado de Correos 134  
48730 Azpeitia  
Guipúzcoa

Testing Laboratory

Tel.: 943-816800  
Fax.: 943-816074

## TEST CERTIFICATE

**COMPANY**

**ENEA EREDU, S. COOP.**

**ADDRESS**

**Apartado 97 20250 LEGORRETA (GUIPUZKOA)**

**CERTIFICATE No 7531**

ACCREDITATIONS:

### ENAC

National Accreditation Organisation

ENAC: 341LE162. Windows

ENAC: 34/LE346. Construction fittings

ENAC: 34/LE347. Wood

ENAC: 341LE347. Wooden flooring

ENAC: 34/LE345. Varnishes

ENAC: 341LE345. Paint

ENAC: 34/LE024. Kitchen fittings

ASSOCIATED WITH:

ENAC  
(National Accreditation Organisation)

ASEFAVE  
(Spanish Association of Light facades and Windows Manufacturers)

FEDIT  
(Spanish Federation of Technological Innovation Organisations)

AETEP  
(Spanish Association of Painting and Associated Trade Technicians)

**STOOL**

**«COMA 140»**

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TEST	TEST CHARACTERISTICS	RESULT
1. Static load on seat (section 2.5.1)	F applied = 1600 N No. cycles: 10	<b>SATISFACTORY</b>
2. Fatigue on seat (section 2.5.5)	F seat = 950 N No. cycles: 120.000	<b>SATISFACTORY</b>
3. Impact on seat (section 2.5.10)	Impact height: 300 mm No. impacts: 10	<b>SATISFACTORY</b>
4. Drop test (section 2.5.13)	Drop height: 900 mm No. falls: 10	<b>SATISFACTORY</b>
5. Tipping test for stools (section 2.4.2)	F vertical: 600 N F horizontal: 20 N	<b>SATISFACTORY</b>

**Tests performed according to UNE 11010:1989 (1-4) and UNE 11011:1989 (5) (test level 5)**

This document is invalid without the test report which coincides with the number of the certificate containing the results of each test.

The results of these tests only refer to the sample(s) analysed in this Centre on the date shown above, and do not imply that production quality is consistent.

(Signature and stamp)



Firma y sello



## TEST RESULT

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

CONTACT: **IÑAKI ELIZEGI**

ADDRESS: **APARTADO 97**

**20250 LEGORRETA**

MATERIAL TESTED: **STOOL «COMA 140»**

TEST METHODS: **TESTS ACCORDING TO UNE 11010:1989 AND UNE 11011:1989**

DATE RECEIVED:	<b>21/09/2001</b>
TESTING STARTED:	<b>26/09/2001</b>
TESTING ENDED:	<b>09/10/2001</b>

Total no. of pages

6

(Including this page)

The test results only relate to material received and tested at the Research Centre on **21/09/2001**.

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**Asier Maiztegi**  
Head, Furnishing Dept

**José M<sup>a</sup> Irure**  
Technician, Furnishing Dept

Azpeitia, 17 October, 2001





## **SAMPLE CHARACTERISTICS**

On 21st September 2001 CIDEMCO received a backless stool from the company ENEA EREDU S. COOP with the reference:

«COMA 140»

## **TESTS REQUESTED**

The tests requested are the Structural Strength and Stability for chairs according to the Standard UNE 11010:1989 and UNE 11011:1989 at the highest level of testing.

## **TESTING AND RESULTS**

The tests carried out are described below, in the order in which they were performed using the same sample.

All tests were conducted at **level 5**, as set out in Annex A of the UNE 11020:1992/2 standard corresponding to use "Severe Public" (furniture intended to be installed in unrestricted places of public access, mostly without any control. The frequency of usage is very high and by a multitude of different people. Due to its location, it is expected to be used in a negligent or even brusque fashion. Examples may be furniture installed in of free access areas of stations or similar, stations bars and cafes, etc).

After the testing, no element, component or union should be broken, and neither should any gaps, cracks or any deterioration of the chair be detected.

The tests conducted were:

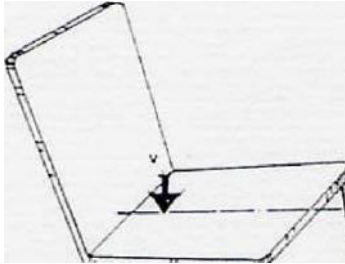
Customer: ENEA EREDU, S. COOP

Ref: Stool «140»



## 1 – STATIC LOAD TEST ON SEAT (UNE 11010:1989 section 2.5.1)

The test involves applying a vertical load of 1,600 N 10 times on the least favourable point of the seat.



- Force applied to the seat: **1,600 N**
- No. of cycles performed: **10**

RESULT: **SATISFACTORY**

## 2 - FATIGUE TEST ON THE SEAT (UNE 11010:1989 section 2.5.5)

The test involves applying a horizontal force V of 950 N on the load point of the seat and performing it over a period of 120,000 cycles.

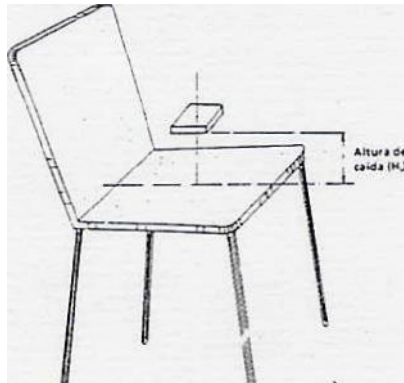
- Force on the seat: **950 N**
- Test frequency: **28 cycles/min**
- No. of cycles performed: **120,000**

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**3 - IMPACT TEST ON THE SEAT** (UNE 11010:1989 section 2.5.10)

The test consists of dropping an impactor 10 times on the seat from a height  $H_i$ .



- Impact height ( $H_i$ ): 300 mm
- No of impacts performed: 10

RESULT: **SATISFACTORY**

**4 – DROP TEST** (UNE 11010:1989 section 2.5.13)

The test consists of dropping a chair from a height  $H_e$  on the legs of the stool at an angle of  $10^\circ$ .

- Drop height ( $H_e$ ): **900 mm**
- No of impacts performed: **10**

RESULT: **SATISFACTORY**

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## 5 - **STOOL TIPPING TEST** (UNE 11011:1989 section 2.4.2)

The test involves applying a vertical force  $V$  on the stool and a horizontal force  $F$  at the height of the seat.

- Vertical force ( $V$ ): **600 N**
- Horizontal force ( $F$ ): **20 N**

**RESULT: SATISFACTORY**

Customer: ENEA EREDU, S. COOP  
Ref: Stool«140»

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## RESULTS SUMMARY

- Standards UNE 1 1010:1989 and UNE 11011:1989 (test 5)
- Level of test: 5 (Public severe)**

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Fatigue on seat (section 2.5.5)	F seat = 950 N No. cycles:120.000	<b>SATISFACTORY</b>
Impact on seat (section 2.5.10)	Impact height: 300 mm No. impacts: 10	<b>SATISFACTORY</b>
Drop test (section 2.5.13)	Drop height: 900 mm No. falls: 10	<b>SATISFACTORY</b>
Tipping test for stools (section 2.4.2)	F vertical:600 N F horizontal: 20 N	<b>SATISFACTORY</b>

Customer: ENEA EREDU, S. COOP  
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