



LABORATORI
D'ENGINYERIA PAPERERA
I MATERIALS POLIMÈRICS



Universitat
de Girona

Product in accordance

with requirements of Directive 2004/12/CE that modifies Directive 94/62/CE
about packaging related in European standard EN 13427:2000

Paper sample referenced as ESTUCADO DOBLE 2C BRILLANTE RH,
manufactured by TORRASPAPEL SA is agree with the evaluation
requirements designed for packaging, detailed in table 1.

Conformity number: 05040_CP16

Issued: 28th October, 2005

Service responsible

M^a Àngels Pèlach

Laboratory responsible

Susanna Presta



DIRECTIVE 2004/12/CE and DIRECTIVE 94/62/CE REQUIREMENTS

Paper sample: ESTUCADO DOBLE 2C BRILLANTE RH

Evaluation abstract:

Evaluation criteria	Evaluation requirement	Declaration
Requirements for measuring and verifying the four heavy metals present in packaging and their release into the environment	To guarantee levels lower than maximum allowed for components (UNE CR 13695-1)	Conform
Requirements for measuring and verifying dangerous substances present in packaging and their release into the environment	To guarantee conformity with EN 13428:2000 Standard (UNE-CR 13695-2; Directive 67/548/CE ; Directive 92/32/CEE ; Directive 2001/59/CE (28 ^a Adaptation)	Conform
Requirements for packaging waste valorisation by means of energy recovery.	To guarantee that calorific gain of waste packaging is suitable (EN 13431:2000)	Conform

PACKAGING. Requirements for measuring and verifying the four heavy metals present in packaging (UNE-CR 13695-1)

1.- SAMPLE DESCRIPTION

- ESTUCADO DOBLE 2C BRILLANTE RH paper sample

2.- FACTORY

- TORRASPAPEL, S. A.

3.- TEST CONDITIONS

Total digestion of sample by means of laboratory microwave MILESTONE previously treated with acids ($\text{HNO}_3:\text{H}_2\text{O}_2:\text{HF}:\text{H}_2\text{O}$) in proportion 3:2:1:2.

Treatment program: total time: 115 min. Increase to 120°C and 5 min stabilization; increase to 150°C and 5 min stabilization; increase to 180°C and 5 min stabilization; increase to 200°C and 5 min stabilization and at last, increase to a 210°C and 5 min stabilization.

Determination of heavy metals have been made by ICP-Mass spectrometry.

4.- RESULTS

Testing date: 30/09/2005.

Metals	Results (ppm)
Mercury	< 0,25
Cadmium	< 0,25
Chromium (total)	9,57 ± 3,49
Lead	3,38 ± 0,65
TOTAL	< 100 ppm

Results expressed in mg element/Kg material

Analysis results indicate than heavy metal content is lower than 100 ppm.

5.- CONCLUSION.

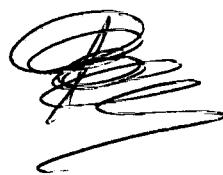
Paper sample analysed referenced as ESTUCADO DOBLE 2C BRILLANTE RH is agree with Article 11 of Directive 2004/12/CE and Directive 94/627CE about concentration levels of heavy metals in packaging and packaging wastes.

Service responsible



Dra. M. Àngels Pèlach Serra

Laboratory responsible



Susanna Presta Masó

**PACKAGING. Requirements for measuring and verifying dangerous substances
present in packaging (UNE-CR 13695-2)**

1.- SAMPLE DESCRIPTION

- ESTUCADO DOBLE 2C BRILLANTE RH paper sample

2.- FACTORY

- TORRASPAPEL, SA

3.- CONFORMITY ANALYSIS

Paper sample doesn't present substances classified as dangerous for environment, or if presents, their concentration are lower than 0.1%, as indicated in Directive 67/548/CE, its modifications (Directive 92/32/CEE) and corresponding adaptations (Directive 2001/59/CE and Directive 1999/45/CE).

Analysis realized in October, 27th 2005

4.- CONCLUSION.

Paper sample analysed referenced as ESTUCADO DOBLE 2C BRILLANTE RH is agree with EN 13428:2000 related in Directive 2004/12/CE and Directive 94/62/CE about presence of dangerous substances in packaging.

Service responsible



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PACKAGING. Requirements for packaging recoverable in the form of energy recovery, including specification of minimum inferior calorific value (UNE-EN 13431)

1.- OBJECTIVE

The main requirement for packaging to be considered recoverable is that it provides the thermodynamic requirements to allow the incineration with energy recovery of packaging waste.

2.- SAMPLE DESCRIPTION

- ESTUCADO DOBLE 2C BRILLANTE RH paper sample

3.- FACTORY

- TORRASPAPEL, S. A.

4.- TEST CONDITIONS

Conformity declaration with this standard has to be reinforced by next requirements:

- Material composition. Packaging composed of more than 50% (by weight) of organic content, provides calorific gain and meets the requirements to be considered recoverable
- Calorific value, when necessary, i.e., if inorganic constituents are higher than 50% (by weight).

So, first determination is the ash content as indicated in international standard ISO 1171:1997.

Sample are conditioned and 1 g of sample are weighed to the nearest 0.1 mg. Insert the sample in the furnace at room temperature. Raise the furnace temperature to 105 °C over a period of 30 min. to dry the sample. Continue heating to 525±10°C, maintaining this

temperature for at least 60 min. When the incineration period is complete, remove the dish from the furnace and allow to cool until the weight is possible.

5.- RESULTS

Testing date: 16/06/2005.

Ash content (%)	Standard deviation
41.50	0.04

Results indicate than organic matter content is 58.50% with a confidence interval of 0.04. This sample is considered energy recoverable.

6.- CONCLUSION.

Paper simple analysed, referenced as ESTUCADO DOBLE 2C BRILLANTE RH is **considered energy recoverable**, in agree with Directive 2004/12/CE and Directive 94/62/CE.

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Chemistry Science Degree