



Laboratori
d'Enginyeria Paperera
i Materials Polimers

**SAFETY OF TOYS. SPECIFICATION FOR MIGRATION OF CERTAIN
ELEMENTS according to UNE EN 71-3:1996 AND DIRECTIVE 2009/48/EC**

1.- SAMPLE DESCRIPTION.

- 2S COATED SILK

2.- MANUFACTURER

- TORRASPAPEL, S.A; CONDAT SAS; and CARTIERE del GARDA SpA (LECTA GROUP)

3.- TEST METHODOLOGY.

Sample preparation and metals extraction have been carried out according to UNE-EN 71-3, chapter 8 and the corresponding actualizations UNE-EN 71-3/A1:2001 and UNE-EN 71-3/AC:2002.

Determination of aluminium (Al), chromium (Cr), manganese (Mn), cobalt (Co), nickel (Ni), copper (Cu), zinc (Zn), arsenic (As), selenium (Se), strontium (Sr), cadmium (Cd), tin (Sn), antimony (Sb), barium (Ba), mercury (Hg) and lead (Pb) have been made by ICP-MS induced plasma spectrometry.

4.- RESULTS.

Testing date: 15/09/2011

Analytical results referred to soluble element, expressed as mg element/kg material are presented in next table.

Metals	Content (ppm)	Maximum allowed value (ppm) directive 2009/48/EC	Maximum allowed value (ppm) UNE-EN 71-3
Aluminium	192,1	5625	
chromium(total)	1,02	37,5	60
Manganese	13,20	1200	
Cobalt	0,70	10,5	
Nickel	3,12	75	
Copper	1,46	622,5	
Zinc	2,29	3750	
Arsenic	3,7	3,8	25
Selenium	0,37	37,5	500
Strontium	90,0	4500	
Cadmium	0,11	1,9	75
Tin	<0,10	15000	
Tin(org)	<0,10	0,9	
Antimony	<0,01	45	60
Barium	3,03	4500	1000
Mercury	0,50	7,5	60
Lead	0,64	13,5	90

Results of migration indicate that none of the elements analyzed surpasses maximum values allowed.

5. - CONCLUSIONS.

Paper sample analysed, referred as 2S COATED SILK is **agree** with UNE-EN 71-3 on safety of toys. Part 3: Migration of certain elements, and directive 2009/48/EC

Service responsible

Laboratory responsible

Josep Puig Serramitja
Dr. Industrial Engineer

Rosa M. Rafart Soy
Engineer