

Customer details: Sensorybeanbags
Doonavani
Minane Bridge
Kinsale
County Cork
Eire
P17 EY86

SATRA reference: CHM0255900/1713/EN

Your reference: PO 4834

Date of report: 19th April 2017

Samples received: 29th March 2017

For the attention of: Julie Hannon

Date(s) work carried out: 11th April 2017

TECHNICAL REPORT

Subject: BS EN 71-3: 2013 + A1: 2014 migration of certain elements on material described as 'Dance Lycra' from Sensory Beanbag.

Conditions of Issue:

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The uncertainty of the results (UoM) in this report is based on a standard uncertainty multiplied by a coverage factor $k=2$, which provides for a confidence level of approximately 95%.

Report signed by: Emma Norris
Position: Chemical Technologist
Department: Chemical & Analytical Technology

WORK REQUESTED:

Material described as 'Dance Lycra' from Sensory Beanbag was received on the 29th March 2017 for migration testing in accordance with the requirements for 'Category III' materials as described in BS EN 71-3:2013+A1:2014.

CONCLUSIONS:

When tested in accordance with BS EN 71-3:2013+A1:2014 and SATRA SOP CAT-003, the material described as 'Dance Lycra' from Sensory Beanbag was found to meet the requirements for 'Category III' materials.

Full results are provided in the table below.

TESTING REQUIRED:

- BS EN 71-3:2013+A1:2014. Safety of toys. Migration of certain elements

RESULTS AND REQUIREMENTS:

SATRA SOP CAT-003 – Migration of ‘general elements’ from toy materials.
(In accordance with clause 7.4 & Annex E of BS EN 71-3:2013+A1:2014)

Analysed by Inductively Coupled Plasma with Mass Spectrometry (ICP-MS)

Material reference:	‘Dance lycra’		UoM (%)	Category III limits (mg/kg)
Procedures**	D4			
Element	Migration (mg/kg)			
Aluminium	< 100	Pass	± 44	70,000
Antimony	< 5	Pass	± 66	560
Arsenic	< 0.5	Pass	± 65	47
Barium	< 10	Pass	± 35	18,750
Boron	< 50	Pass	± 43	15,000
Cadmium	< 0.1	Pass	± 27	17
Chromium* ¹	< 0.2	Pass	± 18	460 (Cr III) 0.2 (Cr VI)
Cobalt	< 1	Pass	± 35	130
Copper	< 1	Pass	± 34	7,700
Lead	< 0.5	Pass	± 38	160
Manganese	< 10	Pass	± 37	15,000
Mercury	< 0.2	Pass	± 35	94
Nickel	< 1	Pass	± 39	930
Selenium	< 1	Pass	± 51	460
Strontium	< 10	Pass	± 44	56,000
Tin	< 1	Pass	± 44	180,000
Organic Tin* ²	Pass		N/A	12
Zinc	< 50	Pass	± 43	46,000

*¹ First action screening method. Where the elemental chromium result (including uncertainty of measurement) is below 0.2 mg/kg, it can be inferred that this meets the requirements for both chromium (III) and chromium (VI).

*² First action screening method. Where the elemental tin result (including uncertainty of measurement) is below 4.92 mg/kg, it can be inferred that this also meets the requirement for organic tin.

APPENDICES:



Sample described as 'Dance Lycra'

Migration limits as set out in BS EN 71-3:2013+A1:2014

Element	Category I (mg/kg)	Category II (mg/kg)	Category III (mg/kg)
Aluminium	5,625	1,406	70,000
Antimony	45	11.3	560
Arsenic	3.8	0.9	47
Barium	1,500	375	18,750
Boron	1,200	300	15,000
Cadmium	1.3	0.3	17
Chromium (III)	37.5	9.4	460
Chromium (VI)	0.02	0.005	0.2
Cobalt	10.5	2.6	130
Copper	622.5	156	7,700
Lead	13.5	3.4	160
Manganese	1,200	300	15,000
Mercury	7.5	1.9	94
Nickel	75	18.8	930
Selenium	37.5	9.4	460
Strontium	4,500	1,125	56,000
Tin	15,000	3,750	180,000
Organic Tin	0.9	0.2	12
Zinc	3,750	938	46,000

BS EN 71-3:2013+A1:2014 clause H.4-Toy Categories

Category I: Dry brittle, powder like or pliable

Category I includes solid toy material from which powder-like material is released during play. The material can be ingested. Contamination of the hands with powder contributes to enhanced oral exposure. The assumed ingestion is 100mg per day.

Category II: Liquid or sticky

Category II includes fluid or viscous toy material which can be ingested and/or to which dermal exposure occurs during playing. The assumed ingestion is 400mg per day.

Category III: Scraped off

Category III includes solid toy material with or without a coating which can be ingested as a result of biting, tooth scraping, sucking or licking. This category includes those materials which are not covered by category I and II. The assumed ingestion is 8 mg per day.

**Preparation & Migration Procedures

Samples were prepared and tested in accordance with the following clauses of BS EN 71-3:2013+A1:2014:

Preparation procedure

- A – 7.3.3.1 Coatings of paint, varnish, lacquer, printing ink, polymer and similar coatings
- B – 7.3.3.2 Polymeric materials
- C – 7.3.3.3 Paper and paper board
- D – 7.3.3.4 Textiles (natural or synthetic)
- E – 7.3.3.5 Glass, ceramic and metallic materials
- F – 7.3.3.6 Other materials, whether mass coloured or not

Migration procedure

- 1 – 7.4.3.1 Coatings of paint, varnish, lacquer, printing ink, polymer and similar coatings
- 2 – 7.4.3.2 Polymeric materials
- 3 – 7.4.3.3 Paper and paper board
- 4 – 7.4.3.4 Textiles (natural or synthetic)
- 5 – 7.4.3.5 Accessible glass, ceramic and metallic materials

NOTE: 'Other materials' are tested using the most appropriate procedure of 2, 3, 4 or 5.

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Issue Date: 1st October 2009