PROSAFE Joint Actions Best Practice

Co-funded by the European Union

Joint Action 2012 GPSD Childcare Articles

Agreement No: 2012 82 01

Final Technical Report - High Chairs

Covering the period: January 2013 - February 2015

February 2015

Disclaimer

This report arises from the Joint Market Surveillance Action on GPSD Products – JA2012, which received funding from the European Union in the framework of the 'Programme of Community Action in the field of Consumer Policy (2007-2013)'.

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Abbreviations

ANEC - the European consumer voice in standardisation

CCA – Child care Articles

CEN - the European Committee for Standardization

Chafea – Consumers, Health and Food Executive Agency

DG-SANCO – Directorate General for Health and Consumers of the European Commission

EEA - European Economic Area

EU – European Union

ENPC – European Nursery Products Confederation

GPSD – General Product Safety Directive

ICSMS - The internet-supported information and communication system for the pan-European market surveillance

JA2012 – Joint Market Surveillance Action 2012

MS – Market Surveillance

NA – Not applicable

NC – Non-Conformities

RAPEX – Rapid Alert System for non-food dangerous products

Executive Summary

This is the final technical report prepared for the product activity on high chairs, as part of the Joint Market Surveillance Action on GPSD Products – JA2012. The Joint Action received funding from the European Union in the framework of the 'Programme of Community action in the field of Consumer policy (2007-2013)'.

The report basically gives an overview of the activities done throughout this particular project, highlighting not only the test results but also the recommendations and conclusions which can be found at the end of this report.

PROSAFE has been now coordinating various market surveillance joint actions during these last years. The joint action called JA2012 dealt with various product sectors, one of which was childcare articles (CCA). A total of sixteen different market surveillance authorities from different EU Member States participated in this specific working group on childcare articles. The actual Member States were Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Latvia, Lithuania, Malta, Norway, Romania, Slovakia and Spain.

All CCA activities were task led by the Greek General Secretariat for Consumer Affairs of the Ministry of Development and Competitiveness. The activities started during the first quarter of 2013 and ends by the first quarter of 2015, whereby the summary of the results will be presented during the JA2012 Final Conference in February 2015. In order to ensure effective project management of this task, PROSAFE recruited the services of an external consultant to task coordinate and project manage, all issues related to this project.

Childcare articles are an innovative product group in constant development, and high chairs, the product group being focused upon within this task group, is no exception. Therefore, the production of new products on the market does not always go hand in hand with their standardization. However, producers and manufacturers are obliged to know the hazards their products might pose, to offer safe products and to provide consumers with information that allows them to evaluate and prevent hazards. Most of the time, these products are intended for children of a very young age, a sector of society which is considered to be a very vulnerable group. Hence, it is even more important that such products are safe.

The main objectives of this project were:

- To update a CCA priority list, that is, a list of CCA products which are of particular interest to market surveillance authorities for future European joint actions
- Market Surveillance on high chairs, including sampling / testing / risk assessment and measures introduced and taken by this task group, in collaboration with the relevant market surveillance authority(ies)

External Stakeholders

This working group continued, as in previous joint actions to work closely with various external stakeholders throughout the project. Representatives from ANEC, CEN and ENPC were particularly active in this project.

European Commission and Chafea

Representatives from Unit B3, Product and Services Safety from DG Health and Consumers also took part in the entire six CCA meetings organised by this working group. The whole project was co-funded by the European Union and the grant agreement was managed by Chafea.

High Chairs

This document focuses on the results, conclusions and recommendations related solely to samples tested by this working group. Seventy high chairs were tested according to the requirements of European standard EN 14988-1:2006+A1:2012 '*safety requirements of high chairs*'.

In view that the period when the samples were extracted from the market (during the first half of 2014) was still rather close to the end of the transitional period between the new standard and the revised 2012 version, it was also decided that some additional testing according to EN 14988-1:2006 had to be applied, in particular with regards to the restraint system and lateral protection.

It is important to note that no flammability or chemical testing was carried out on these samples. However, further checks were carried out in line with the requirements as per Annex of Commission Decision (2013/121/EU) of 7th March 2013, in particular special attention was given to requirements related to packaging, the identification of the manufacturer and importer (including contact details: name and address), entanglement hazards and stuffing materials that could constitute choking hazards and also purchase information;

Additional testing was carried out as well when the respective high chair could be considered as a reclined cradle too. In that case, they were tested according to EN 12790:2009 (standard for reclined cradles).

All the samples were tested at the accredited laboratory of SGS in Aix-en-Provence, France.

TEST RESULTS

Caution!

The results within this report are based on products that were sampled from the markets in the participating countries by experienced market surveillance inspectors that were looking for non-compliant and potentially unsafe products. As in any routine market surveillance activity, the results represent the targeted efforts that authorities undertake to identify unsafe products. They do not give a statistically valid picture of the market situation.

Although identified non-conformances to a particular standard within a sample are of particular importance to market surveillance authorities, it is much more important for surveillance authorities to determine the final level of risk through what is called risk assessment. When it came to risk assessment, all the market surveillance authorities utilized the methodology indicated within Commission Decision 2010/15/EU. For this purpose, all participating authorities were also asked to ensure that their inspectors were fully up-to-date with the latest PROSAFE e-learning tool on risk assessment - http://elearn.prosafe.org/ and all risk assessment reports were formulated in line with the website of the European Commission - http://europa.eu/sanco/rag.

CONCLUSIONS

Taking into account the comments made above, around 17% out of the 70 samples that were tested, were identified to have a serious risk, 13% had a high risk, 24% had a medium risk and 19% had a low risk. The risk assessment results helped the market surveillance authorities to determine the final actions and measures to be taken from their end. Measures were taken accordingly. Similar to the previous joint action on child care articles within JA2011, the same positive note can be reiterated by stating that in this case 81% of the measures were taken voluntarily in agreement between the market surveillance authorities and economic operators.

With regards to the measures taken, no specific action was taken on 12 of the samples since the market surveillance authorities determined that they did not have any particular safety issues. Out of the remaining 58 samples which had some sort of measures taken, 7% of the samples were recalled from consumers, 29% were involved in a sales ban or a withdrawal, another 24 % needed some corrective or preventative action whilst an additional 21% only had minor measures taken. The remaining samples were still under work-in-progress.

OBSERVATIONS AND RECOMMENDATIONS

Through the experience gathered and with technical support and recommendations from the laboratory itself, the market surveillance authorities involved in this project have made a number of observations and recommendations. More information can be found within chapter 8 of this report.

1. Background Information

This chapter presents a short extract of the project description. The full description can be found in the Grant Agreement.

1.1 Title of the Activity

Childcare Articles, High Chairs

The activity was part of Joint Market Surveillance Action on GPSD Products – JA2012.

The European Commission supported the Joint Action financially under Grant Agreement No. 2012 82 01.

1.2 Participating Member States

Sixteen market surveillance authorities from 16 different Member States from within the European Economic Area have taken part in this project. The countries involved were: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Latvia, Lithuania, Malta, Norway, Romania, Slovakia and Spain. The applicant body that also took overall responsibility for the Joint Action was PROSAFE.

1.3 Overview of Key Staff in the Activity

The Activity Leader was Stamatia Chroni from the Greek General Secretariat for Consumer Affairs of the Ministry of Development and Competitiveness.

The Activity Leader was supported by the PROSAFE consultant, Noel Toledo.

1.4 Main Objectives

The main objectives of this project were:

- To update a CCA priority list, that is, a list of CCA products which are of particular interest to market surveillance authorities for future European joint actions
- Market Surveillance on high chairs, including sampling / testing / risk assessment and measures taken by this task group.

1.5 The Phases of the Activity

The Activity was a market surveillance action that followed these phases:

Phase 1 – This involved an initial amount of extensive coordination, ensuring that all involved market surveillance authorities are fully aware of the objectives and deliverables of the project. It also involved liaison with a number of external stakeholders, making sure that they are fully aware of the project objectives. This phase started around the first quarter of 2013 and ended by around the third quarter of that year.

Three CCA joint meetings were utilised for this purpose, upon which a project plan was agreed upon. Additionally, the sampling criteria and sample categories were identified.

Phase 2 - This phase mainly involved the issuing of an open call for tender for testing by accredited laboratories. Once the laboratory was chosen, the actual sampling started. This covered the period between the first and second quarter of 2014.

Two other CCA meetings were held during this period, one of which was organised at the laboratory itself in order to further discuss individual test reports, associated risks and measures to be taken.

Phase 3 – This final phase was mainly the final implementation phase whereby the participating market surveillance authorities took action on the samples tested after discussing in detail all the respective test reports. It is interesting to note that most of the action taken was a form of voluntary action taken directly by the economic operators, after the authority informed them of the respective risks found with the samples tested.

A final CCA meeting was held on 27th November 2014 whereby a summary of the test results, risks found and action taken were presented and discussed together with the participant m.s. representatives and the external stakeholders.

1.6 Meetings held during the project

Six CCA meetings were organised in all throughout the two-year project time frame: from around the first quarter of 2013 up till the first quarter of 2015. A representative from Unit B3, DG-SANCO, was always present for the meetings, whereby updates were also given on any particular issues discussed during the GPSD Committee meetings.

Technical Core Group (High Chairs)

In view that the working group was one of the largest specific task activities ever coordinated by PROSAFE, it was agreed from the start of this project that the task leader and task coordinator had to be supported by a small team, made up of participating market surveillance authorities. Participants from Belgium and Slovakia were chosen since they had just recently performed national market surveillance projects on high chairs and therefore had valid experience in this particular area. The main scope of this core team was to support this project in any technical issues related to the project.

1.7 Type of Products Inspected

A substantial number of high chairs were inspected during this project.

Economic Operators inspected

24 manufacturers and **46** importers from the European Union were inspected; over **330** outlets and distributors were also inspected. Therefore, in total, over **400** economic operators and around **720** models were inspected during this project, involving as well the checking of around 240 websites.

70 samples from 66 different brands were eventually extracted from the Single Market and sent for testing at an accredited laboratory.

Categorising the samples tested

The definition of a high chair as stipulated within the European Standard EN 14988:2006+A1:2012 is as follows:
"A free standing chair that elevates the child to approximately dining table height, intended for holding the child from 6 months to 36 months of age who is capable of remaining in a sitting position due to his or her own coordination."

In order to better focus on the various type of categories that are found within high chairs, the working group decided to categorise the samples into 5 main categories. The photos on the next page are from some of the actual samples tested by this working group.

HC1 - Classic (Traditional) High Chairs

HC2 - Foldable High Chairs

HC3 - High Chairs with adjustable back-rest

HC4 - Designer-type of High Chairs

HC5 - Other type of high chairs (particularly including those having a dual function)

More detailed information can be found in Chapter 5.

1.8 Main Hazards associated with High Chairs

One of the main hazards associated with high chairs is the 'falling hazard'. Figure 1 outlines the main product hazards and the injuries associated with them.

Product hazard	Injury
1. Shear/compression points	Laceration, cutting, bruising
2. Lack of stability	Falling injury
3. Sharp edges, corners and points	Cutting, puncture
4. Poor structural integrity	Falling injury
5. Insufficient locking mechanism (foldable high chairs)	Falling injury, strangulation, bruising
6. Insufficient or no lateral protection	Falling injury
7. Inefficient harnesses	Falling injury, strangulation
8. Openings that allow a child to fall out	Falling injury, strangulation
9. Small parts	Choking / Suffocation

Figure 1 - Main Hazards in high chairs focused upon by this working group

More information is provided below with regards to each product hazard identified within Figure 1 above.

1. Shear/compression points
Accidents may occur when children put their fingers in between moving parts of the high chair.

2. Lack of Stability
High and narrow models may possibly have a higher chance of tipping over and therefore cause various types of accidents. Additionally, having more than two caster wheels will make the high chair even more unstable.

3. Sharp edges, corners and points
Sharp edges, corners and points may cause various kinds of bruises and cuts to children. One needs to take into consideration the fact that young children may not be aware of such dangers and therefore they can easily hurt themselves over such sharp edges, corners and points.

4. Poor structural integrity
The structural design and material used may not be strong enough for its purpose, with a result that the child may end up falling, possibly leading to serious consequences.

5. Insufficient locking mechanism (foldable high chairs)
Foldable high chairs may having defective locking mechanisms which could lead not only to bruising but also very serious consequences related to falling and strangulation hazards.

6. Insufficient or no lateral protection
Not having enough lateral (side) protection can easily lead to children falling over from the high chair with again possibly very serious consequences.

7. Inefficient harnesses
Inefficient harnesses could cause falling injuries when children fall out of the harness completely or even strangulation if the child falls half way and get entangled by the harness.

8. Openings that allow a child to fall out
Opening in the high chairs which allows a child to move out of the vehicle could result in falling injuries or hanging/strangulation if the child gets caught with the head between parts of the product or hanging by the harness.

9. Small Parts
Small parts which can get detached by the child can cause choking and suffocation.

1.9 Testing of Products

After an open call for tender for testing of high chairs by an accredited laboratory, SGS at Aix-en Provence was chosen as the laboratory which had to perform testing on the samples extracted from the market.

The laboratory has been an expert for many years in the field of child safety. It is accredited by COFRAC in accordance with ISO 17025 for all activities regarding children's products testing and approved by the French Ministry of Industry to deliver Type Examinations in accordance with the Decree 91-1292 on child care articles.

It was agreed by the market surveillance authorities that all samples had to be tested according to EN 14988:2006+A1:2012. However, whenever there was a failure on the restraint system and lateral protection, the laboratory had to also perform similar tests in line with EN 14988:2006. This provided market surveillance authorities with enough information to be able to not only risk assess the product itself but also to determine the type of measures taken on the respective samples.

It was also considered that some high chairs may have a function as a reclined cradle, by simple reclining of the backrest or by the addition of a spare component. For this function, compliance with relevant standard EN12790: 2009 was checked. Additional testing was carried out as well,when the respective high chair could be considered as a reclined cradle too. In that case, they were tested according to EN 12790:2009 (standard for reclined cradles)

A protocol was developed to anticipate additional provisions laid down in the Decision published by the EU in March 2013 concerning certain seats for children; in particular special attention was given to requirements related to packaging, the identification of the manufacturer and importer (including contact details: name and address), entanglement hazards and stuffing materials that could constitute choking hazards and also purchase information.

A special CCA meeting was held at the SGS laboratory in order to discuss sample failures to particular clauses of the standard as well as determining the overall risk associated with the respective samples.

Of particular importance were the discussions related to risk assessment and measures to be taken, ensuring as much as possible, a coordinate approach amongst all participating authorities involved in this project.

Demonstrations by SGS experts, during the meeting held at SGS in Aix-en-Provence, France.

Compliance to particular standards

As indicated earlier on, 70 high chairs have been tested in accordance with the standard EN 14988:2006 +A1:2012.

It is also important to note that:

41 (58%) high chairs,their manufacturer claim compliance with the previous standard EN 14988:2006

17 (24%) high chairs,their manufacturer claim compliance with EN14988:2006+A1:2012.

10 (14%), their manufacturer did not claim compliance with any standard, and 2 showed to comply with other references (ENV1178 and NFS54-007)

27 high chairs which (their manufacturer) claimed compliance with the previous standard, had been tested additionally for the relevant requirements in EN14988:2006 on restraint system and lateral protections.

3 high chairs included the function as a reclined cradle and have been tested in accordance with relevant requirements of EN12790: 2009.

More information on the product categories and relevant statistics can be found within Chapter 5.

1.10 Liaisons

During the project, there was strong liaison with DG-SANCO whereby, as indicated earlier on, a representative from Unit B3, Health & Service Safety was always present for the meetings. This ensured an indirect liaison with the GPSD Committee since the Commission representative always updated this working group with any particular relevant issues.

Through the priority setting exercise on child care articles, this working group managed to liaise with a much larger number of market surveillance authorities from various countries throughout the EEA.

Additionally, there was periodic liaison with external stakeholders too, ensuring that they were kept up-to-date with whatever activities were being focused upon. Input and comments were also received from them during the open sessions of the CCA meetings.

Through the JA2012 annual workshops, the task leader was able to liaise and discuss issues with other activity leaders within the joint action JA2012, ensuring that best practices are shared amongst market surveillance authorities.

Although there was no direct link with Custom authorities, it is the intention of this working group to send information to the respective contact point about possible checklists that can be used in the future by Custom authorities whenever they are focusing on such products.

2. Technical Overview of EN 14988

EN14988 was published first in 2006 by CEN. The standard is split in two parts. Part 1 gives safety requirements and part 2 test methods for Children's high chairs. An amendment A1 has been published in 2012 that mostly specifies additional requirements and relevant test methods for the restraint function of the high chair.

The standard describes requirements and relevant test method to assess physical and mechanical characteristics and properties of the product as follows:

2.1 Construction / Dimensional Requirements

Clauses 4 – Material and 5 – General

A visual control allows checking there is no hazard due to dirt or inadequate material, sharp edges or points, inappropriate connecting screws

Clause 5.2 – Holes gaps and openings

Finger entrapment hazards are considered within static openings that allow a 7 mm gauge to enter by at least 10 mm when pushed with a force up to 30N; where a 12 mm gauge cannot enter.

∅: 7 and 12 mm

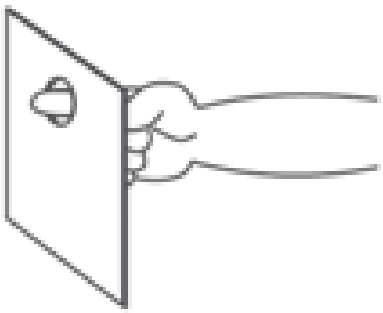

Figure 2 – Gauges used for assessment of finger entrapment

Dimensions have been introduced to take into account the size of fingers of a child able to try introducing his finger(s) into any hole.

The hazard occurs when the finger enters a hole or gap in such a way the child is not able to remove it easily, as impairing blood circulation causes the fingertip inflating.

These openings are recorded when they are accessible to the child: the standard considers every part of the high chair above the under surface of the seat, except components of the restraint system.

Entrapment of torso is considered in the seat, when a probe designed to reproduce the torso of a small child can pass when pushed with a 30N force.

Base width = 86 mm
End width = 40 mm
Base length = 120 mm

Figure 3 – Torso probe

Figure 4 - Example of opening that does not meet the requirement of the standard

This requirement is provided to prevent entrapment hazard, if the child slips into an opening big enough to allow his passage until the head is trapped or falling hazard if the whole body and head can pass through. It is not applicable to leg openings as these are functional parts of the high chair.

Clause 5.3 – Moving parts

This clause checks gaps between moving parts likely to create hazards of shear and squeeze points when the product is ready for use.

Shear and squeeze points occur when the distance between rigid parts moving during use can vary between 5 and 18 mm, or 5 and 12 mm for compression hazards (opening/closing distance)

Gaps are checked using gauges with diameters of 5, 12 and 18 mm as shown further below.

Figure 5 – Gauges for assessment of moving parts

Figure 6 – Example of squeeze point on high chair

Shear and squeeze points during setting up or folding the high chair are considered as acceptable as the adult who is handling the high chair is able to control the movement and avoid being hurt, unless they are activated by powered mechanisms.
Shear and squeeze points under the action of powered mechanisms (such as springs) are not acceptable if the distance can be comprised between 5 and 18 mm: if the 5 mm gauge can enter the gap with a force up to 30N a 18 mm gauge shall also enter the gap, with a force up to 5N.

Any part of the high chair which can fold or be detached shall be locked to avoid release by the child using the product, by another child or by unintentional action by an adult. This condition is met if:

a) a locking mechanism is automatically engaged and the load has a closing effect on the locking mechanism;

or

b) at least two independent locking mechanisms are provided for the movable part or system; or

c) locking mechanisms under load cannot be released unintentionally.

When the product is ready for use, there shall be no residual accessible squeeze points which can be closed to less than 12 mm, when a 5 mm gauge can be inserted with 30N force.

Figure 7 – Example of squeeze on a high chair

Clause 5.4 – Locking mechanisms for folding high chairs

Folding high chairs shall be fitted with locking mechanisms to prevent a high chair from folding whilst a child is in the high chair and also when a child is being put in and taken out of the high chair.

- Incomplete deployment is avoided if one of the following conditions is met
  - the weight of the child using the product acts to prevent the folding;
  - or at least one locking mechanism engages automatically when the product is deployed for use.
- Unintentional folding is avoided if one of the following conditions is met
  - at least one locking mechanism requires a minimum force of 50 N
  - or at least one locking mechanism requires the use of a tool to be released,
  - or folding is only possible when two independent locking mechanisms are operated simultaneously,
  - or there are two or more automatically engaging locking devices that cannot be released by one single action,
  - or folding of the high chair requires two consecutive actions, the first of which shall be maintained while the second is carried out.

Clause 5.6 – Restraint system

As falling is the most important hazard due to the use of high chairs, restraint is the main function that needs to be met.

The requirements have been modified by the amendment published in 2012: to take into account various designs and habits the restraint system can be

- ***active*** : a set of harness components, crotch strap, waist belt and shoulder straps is provided or

Figure 8 – Example of active restraint system

- ***passive*** : the restraint function is achieved by suitable dimensions of the seat;

Figure 9 – Example of passive restraint system

Details of the requirements and changes introduced by the amendment

<table>
<tr><th>EN14988-1: 2006</th><th colspan="2">EN14988-1 +A1: 2012</th></tr>
<tr><td>Restraint system comprises either a crotch restraint and a horizontal component or an integral harness
(Assembly intended to retain the child in the high chair comprising either a crotch strap, waist strap and shoulder straps, or straps that pass over the child's shoulders and between the child's legs.)</td><td colspan="2">The high chair shall have an active or a passive restraint system</td></tr>
<tr><td>If the backrest is reclinable, an integral harness shall be provided</td><td colspan="2">If the back rest can be reclined to less than 60° to the horizontal the product shall have an active restraint system</td></tr>
<tr><td>Minimum width of straps: 20 mm</td><td colspan="2">Minimum width of straps: 19 mm</td></tr>
<tr><td>Strength tests are carried out on the elements of the restraint system: attachment points, slippage of adjusters</td><td colspan="2">Strength tests are carried out on attachments points and on the straps and adjusters, but test method has been modified</td></tr>
<tr><td>Dimensional requirements for attachment points when provided</td><td colspan="2">Same dimensional requirements for attachment points when provided</td></tr>
<tr><td rowspan="4"></td><td>Active restraint system</td><td>Passive restraint system</td></tr>
<tr><td>Shall be supplied with the high chair</td><td>Specific requirements applicable to lateral protections</td></tr>
<tr><td>Two types of lateral protections are accepted</td><td>A crotch restraint and a horizontal element which create two openings for the child’s legs;</td></tr>
<tr><td>A waist belt adjustable to the size of the child and a crotch strap, where the crotch strap shall be such that the waist belt can be used only in conjunction with it; or
An integral harness adjustable to the size of the child and comprising of either
a crotch restraint, a waist strap and shoulder straps, where the crotch restraint shall be such that the waist strap can be used only in conjunction with it; or
straps that pass over the child's shoulders and between the child's legs.</td><td>The leg openings shall not allow passage of the wedge block when tested in accordance with EN 14988-2:2006+A1:2012, 6.14.1
  
 
Base width = 76 mm
Base length = 140 mm</td></tr>
</table>

		Full length = 108 mm Bottom length = 76 mm
		There shall be no vertical gap between the passive crotch restraint and either the horizontal element or the seating surface that allows free passage of the leg probe (cylindrical probe with a diameter of 38 mm and a length of at least 76 mm) from one leg opening to the other;
		The horizontal distance between the front surface of the backrest and the crotch restraint shall be less than 216 mm
		The horizontal distance between the front surface of the backrest and the horizontal member shall be less than 250 mm

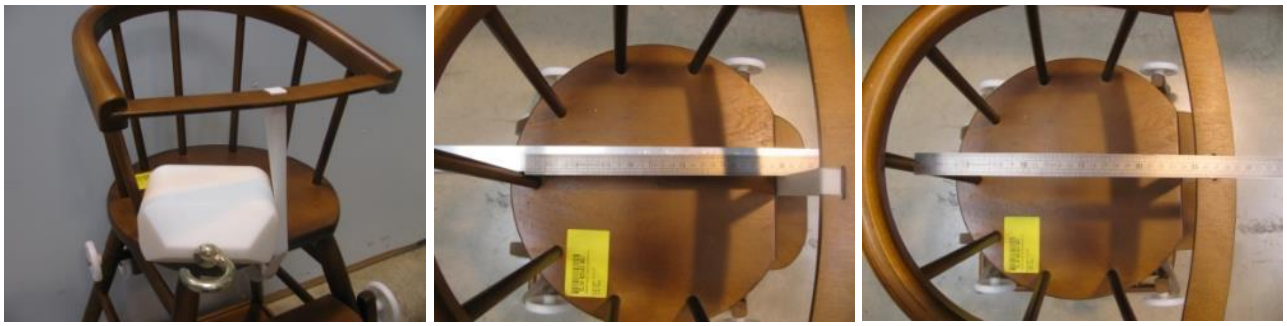

Figure 10 – Example of a passive restraint system that does not meet the requirements

Clause 5.7 – Lateral protection

Lateral protection belongs to the restraint function of the high chair, limiting sideways movement of the child inside the seat.
Requirements have been improved by the amendment published in 2012 and linked to the requirements for passive or active restraint system.

Details of the requirements and changes introduced by the amendment

<table>
<tr><th>EN14988-1: 2006</th><th colspan="2">EN14988-1 +A1: 2012</th></tr>
<tr><td>The high chair shall be fitted with arms or other means of lateral protection. The distance from the seat surface to the top of the lateral protection shall be a minimum of 140 mm</td><td colspan="2">The high chair shall be fitted with lateral protections.</td></tr>
<tr><td rowspan="3"></td><td>Lateral protection for high chairs fitted with an <u>active</u> restraint system</td><td>Lateral protection for high chairs fitted with a <u>passive</u> restraint system</td></tr>
<tr><td>The lateral protection shall have a height of at least 140 mm, when measured in accordance with EN 14988-2:2006+A1:2012, 6.13.1 for at least the length specified below. Openings in the lateral protections are allowed, provided that they comply with all the relevant requirements of this standard.</td><td>The lateral protections shall extend from the backrest to the horizontal component in front of the torso of the child. Openings in the lateral protections are allowed, provided that they comply with all the relevant requirements of this standard.</td></tr>
<tr><td>The lateral protection shall extend from the backrest to the position at which the crotch restraint is fixed to the seat, but shall never be shorter than 150 mm</td><td>The lateral protection shall have a height of at least 140 mm on the whole length of the lateral protection</td></tr>
</table>

Clause 5.8 – Backrest

The minimum height of the backrest requested by the standard is 250 mm when it is measured in the upright position.
If the backrest can be reclined to less than 60° from the horizontal the minimum length is 400 mm; to ensure the full back of the child is supported in lying position.

Clause 5.10 – Seat front edge

To avoid pain due to the prolonged contact of legs with a rough angle the standard requires a minimum radius of 5 mm is respected at the seat front edge

Clause 5.11 – Castors and wheels

To avoid undue movements of the high chair 2 wheels or castors maximum are allowed.

2.2 Small Parts

Clause 5.5 – Small parts

Applies to the whole product, small parts are likely to cause choking and ingestion hazards.
Removable parts (intended to be removed without the use of a tool) shall not enter the small parts cylinder.
Other parts attached to the high chair that are likely to enter the small parts cylinder, shall resist a 50 N or 90 N force (depending on the size) applied during 10 s

2.3 Strength and Durability

Clause 5.4.4 – Locking mechanisms strength

Locking mechanisms for the folding system of high chairs shall resist a 200N force applied in the most adverse condition.

Figure 11 – Locking mechanism strength

Clause 5.13 – Durability of locking mechanisms

Locking mechanisms for folding of the high chair, adjustment of the backrest, tray, footrest….. are submitted to 300 operations

Clause 5.6 – Restraint system

Attachment points of the restraint system are submitted to a 150N force during 1 min.
Each component of the restraint system is submitted to a 150N force during 1 min.
Slippage of the straps is assessed with a 150N force also applied during 1 min.

Clause 5.9 – Strength of reclinable backrest

Locking mechanisms of reclinable backrests shall maintain the backrest in position when a 100N force is applied

Figure 12 – Strength of reclinable backrest test

Clause 5.12 – Structural integrity

To ensure structural strength is met the high chair is submitted to different impact and static load tests.

Impact test on the high chair

Using a hammer that will strike, from the outside, the centre of the uppermost point of the back, the front, and both lateral protections.

Head: steel mass 6.5 kg

Arm: length 1000 mm, mass 2 kg

Figure13 – Impact hammer and test

Seat vertical load test
The seat is evenly loaded with 40 kg during 1 min, then the highchair is lifted clear of the floor at the point of balance on the lateral protection and maintained in this position during 1 minute.

Footrest vertical load test
The footrest is loaded with 20 kg during 1 min

Tray tests
- a 200N force is applied 10 times horizontally from all sides of the tray and maintained during 30s
- a downward vertical force of 200 N is applied at the geometric centre of the tray and maintained during 1 minute – as the high chair is not loaded this test also checks the stability
- removable trays are dropped through a height of 1000 mm onto a floor surface made of rubber placed over a concrete base, once on each different side and on three additional points likely to be destroyed by the test

2.4 Stability

Falling hazards are due to a poor restraint function of the high chair – the restraint system is not efficient enough to avoid sudden and dangerous movements of the child and to lack of stability.
Following tests have been developed to take into account possible movement of children inside the high chair, leaning outside or trying to push away from the dining table.

A series of stability tests are carried out on high chair, and for each test the most onerous possible adjustment has to be considered.

The principle of stability tests is to apply loads on parts of the high chair, of at certain distances as follows:

Clause 6.2 – Sideways stability
A force of 150N is applied through a 15 kg load suspended to a beam placed on the lateral protections of the high chair, at 140 mm from the inner edge of the side protection

Figure 14 – Sideways stability test

Clause 6.3 – Rearwards stability

A 150N force is applied using a mass of 15 kg at a distance of 140 mm horizontally outwards from the most forward point at which the unloaded beam is supported by the backrest.
To take into account warping of plastic assemblies the mass is applied for (60 ± 3) s, unless the high chair overturns before.

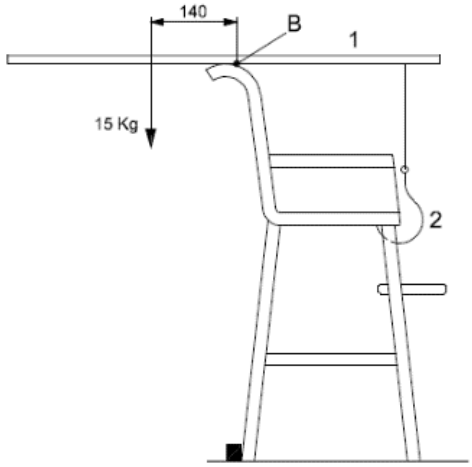

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Figure 15 – Rearwards stability test

Clause 6.4 – Forwards stability

The seat is loaded with a cylinder of 5 kg mass and 100 mm placed at the centre line of the seat with its centre of gravity 80 mm from the front edge of the of the seat
A horizontal force of 25 N is applied outwards at the uppermost front part of the high chair

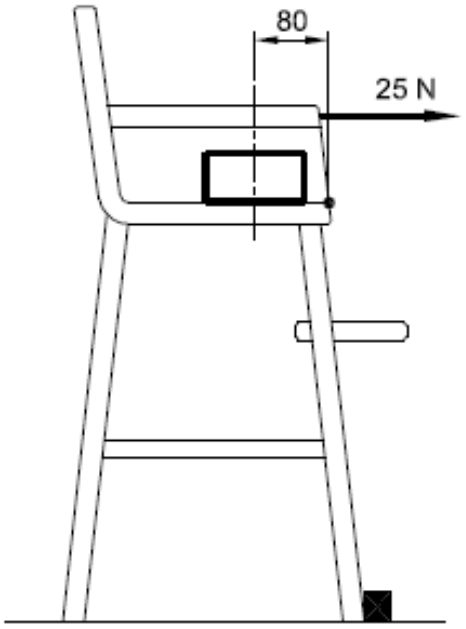

Figure 16 – Forwards stability test

Clause 6.5 – Footrest and horizontal frame member stability

As can be seen in Figure 17, a downward vertical force of 200 N is applied through a loading pad to the footrest or horizontal member at a position 25 mm from the outer edge
The test is to be repeated to any horizontal frame member most likely to cause overturning.

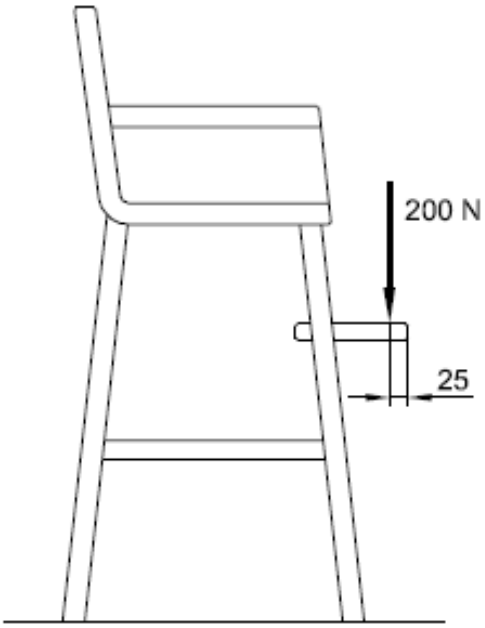

Figure 17 – Footrest stability test

2.5 Packaging

Plastic bags used for the packaging shall either meet the requirements of EN71-1 (this usually is fulfilled when the thickness of the plastic sheet is over 0,038 mm), or shall be conspicuously marked in the official language (s) of the country where the high chair is sold with the following warning:

"TO AVOID DANGER OF SUFFOCATION REMOVE PLASTIC COVER BEFORE USING THIS ARTICLE. THIS COVER SHALL BE DESTROYED OR KEPT AWAY FROM BABIES AND CHILDREN"

Other words have been accepted, when they clearly convey the same warning.

2.6 Product Information

Two types of product information are required by the standard:

Marking
The product shall be permanently marked.
A warning sentence: "WARNING. DO NOT LEAVE THE CHILD UNATTENDED" is required, together with information on the standard the product claims compliance with and the name of the manufacturer or importer.

Instructions for use
Contain warnings and statements that are necessary for a safe use of the product.

Product information shall be given in the language(s) of the country(ies) where the high chair is sold.

3. Technical Input from Commission Decision 2013/121/EU

Of 7 March 2013 on the safety requirements to be met by European standards for certain seats for children pursuant to Directive 2001/95/EC of the European Parliament and of the Council on general product safety.

Some of the provisions set forth in the decision are already covered by the amendment published in 2012; but the commission has issued a Mandate in July 2014 to request CEN working again on certain safety issues only partially or not covered in the standard.

In order to see the effect on the market of this decision, these issues have been detailed and added in a test protocol.

Packaging

- Must also bear a large, clear symbol or diagram indicating that there is a potential hazard.
- Identifies the manufacturer and importer *(including contact details: name and address)*

Entanglement hazards

There must be no cords, ribbons or similar parts (with the exception of the restraint system)

Choking hazards

Stuffing materials that constitute choking hazards must not become accessible when submitted to the forces that a child can apply.
The test method described in EN71-1 § 8.4.2.2 was proposed to assess accessibility of stuffing material:

Use clamps with jaws to which discs with a diameter of 19mm are affixed. Attach the clamps at the most onerous position of the casing (e.g.seam joint) not less than 30 mm apart and equidistant to the seam. If there is insufficient material to fully attach the 19 mm disc jaws, the tension test below shall be performed on another appropriate part, instead of across the seam. Gradually apply a force of (70 ± 2) N between the two clamps over a period of approximately 5 s. Maintain the force for 10s. Determine whether the stuffing material becomes accessible

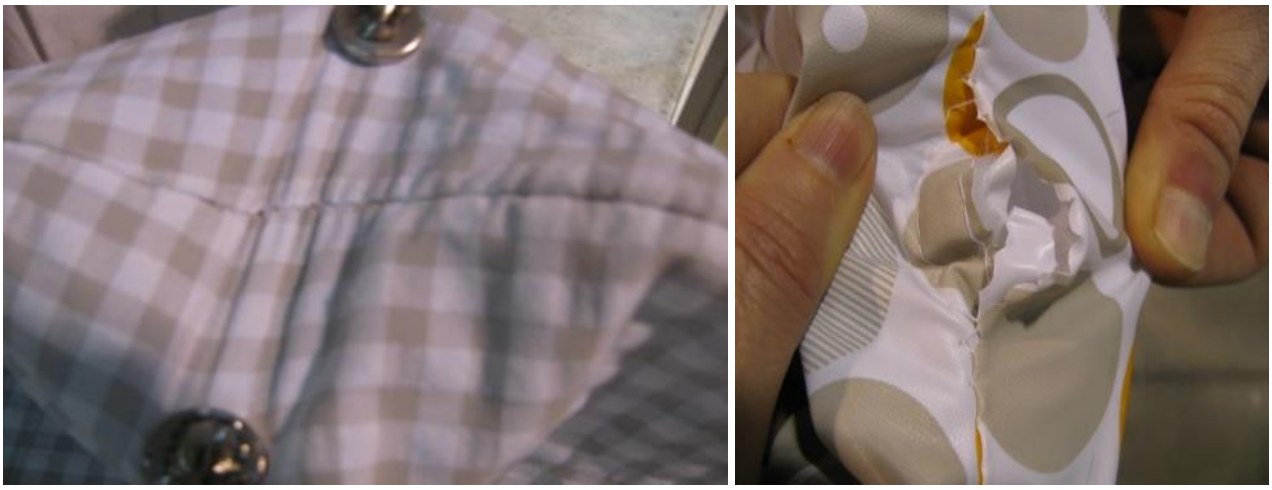

Figure 18 – Example of seams strength test

Purchase information

The consumer must be able to clearly see the purchase information at the point of sale. The information must contain at least the following statement or an equivalent statement, both in writing and in a self-explanatory pictogram: *'This product is intended for children up to 36 months old, weighing a maximum of 15 kg, who are able to sit up unaided.'* Additional safety information must be provided if the product can be altered, either to be used for play or to be converted into a children's chair, that can be adjusted to fit the child at different stages of development (the 'grow with the child' feature).

4. Technical Overview of EN 12790:2009

As certain high chairs may have a full reclined position that allows accommodating young babies from birth it was decided to conduct additional testing to check if these products meet the requirement of the EN12790: 2009, applicable to reclined cradles.

The criterion to determine if a reclined cradle function is met has been decided using the standard applicable on wheeled child conveyances EN1888: 2012 – to accommodate a young baby less than 6 months the angle between the seat and the backrest can be adjusted to at least 150°.

Tests then were only conducted on relevant clauses when the requirement was not already covered by EN14988+A1: 2012, as follows:

Reclining system

The adjustment mechanism(s) of the backrest shall not be positioned on the inner and upper surface which supports the child, and the backrest shall be fitted with a stop at the maximum reclined position that will avoid sudden release and contact with a rigid part of the product when tested.
Durability of the adjustment mechanism is checked by 300 operations.
The test consists in releasing the adjustment mechanism of the backrest to check its movement and angles.

Angle and height of seat unit

To achieve a safe and comfortable position to the child the standard requires angles to be met

- the angle between the backrest and the seat shall not be less than 90° in any position of use;
- the angle between a 9 kg test cylinder placed against the backrest and the horizontal shall be between 10° and 80°
-

Stability

Tests for assessing the stability of a reclined cradle are different from those carried out on high chairs. Therefore the stability is checked additionally, placing the high chair on a 15° slope and using a 9kg test cylinder : frontwards, rearwards and sideways

Slippage of the reclined cradle

The principle of the test is to place the sample on a glass surface inclined at 12° to the horizontal. A 9 kg test cylinder is placed within the product and it is checked after one minute, that the product did not slip down the surface by more than 20 mm.

Restraint system

The strength required for harness anchoring points is lower in EN12790 than in EN14988; however the test method for the slippage is different and needs to be repeated in the reclined cradle function.

Product information

Different information is provided in EN12790 and shall be controlled accordingly

5. Definition and Categories

Children's high chairs are defined in EN14988-1, as a "*free standing chair that elevates the child to approximately dining table height, intended for holding the child from 6 months to 36 months of age who is capable of remaining in a sitting position due to his or her own coordination*."

5 categories have been selected and differenced as follows:

Category 1: HC1 – Traditional high chairs (13 items)
Category 2: HC2 – Foldable high chairs (18 items)
Category 3: HC3 – High chairs with adjustable backrest (17 items)
Category 4: HC4 – Designer type high chair (13 items)
Category 5: HC5 – Other (9 items)

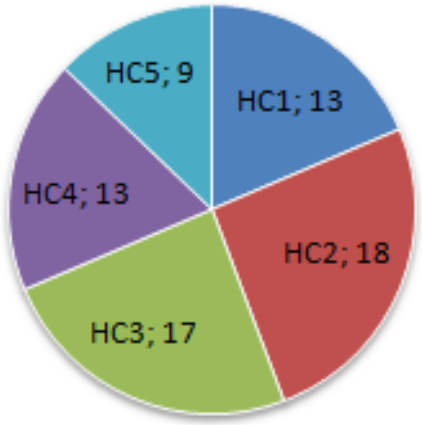

Figure 19 - Proportion of different types of High Chairs

With regards to the claimed origin, 31 high chairs (44%) were labeled with their country of origin as being China, another 27 high chairs (39%) where from the European Economic Area (EEA), 6 (9%) from other countries (Taiwan, and 1 from Thailand) and 6 high chairs from unknown origin.

70 High Chairs

	Number	Percentage
EEA	27	39%
China	31	44%
Other	6	9%
Unknown	6	9%

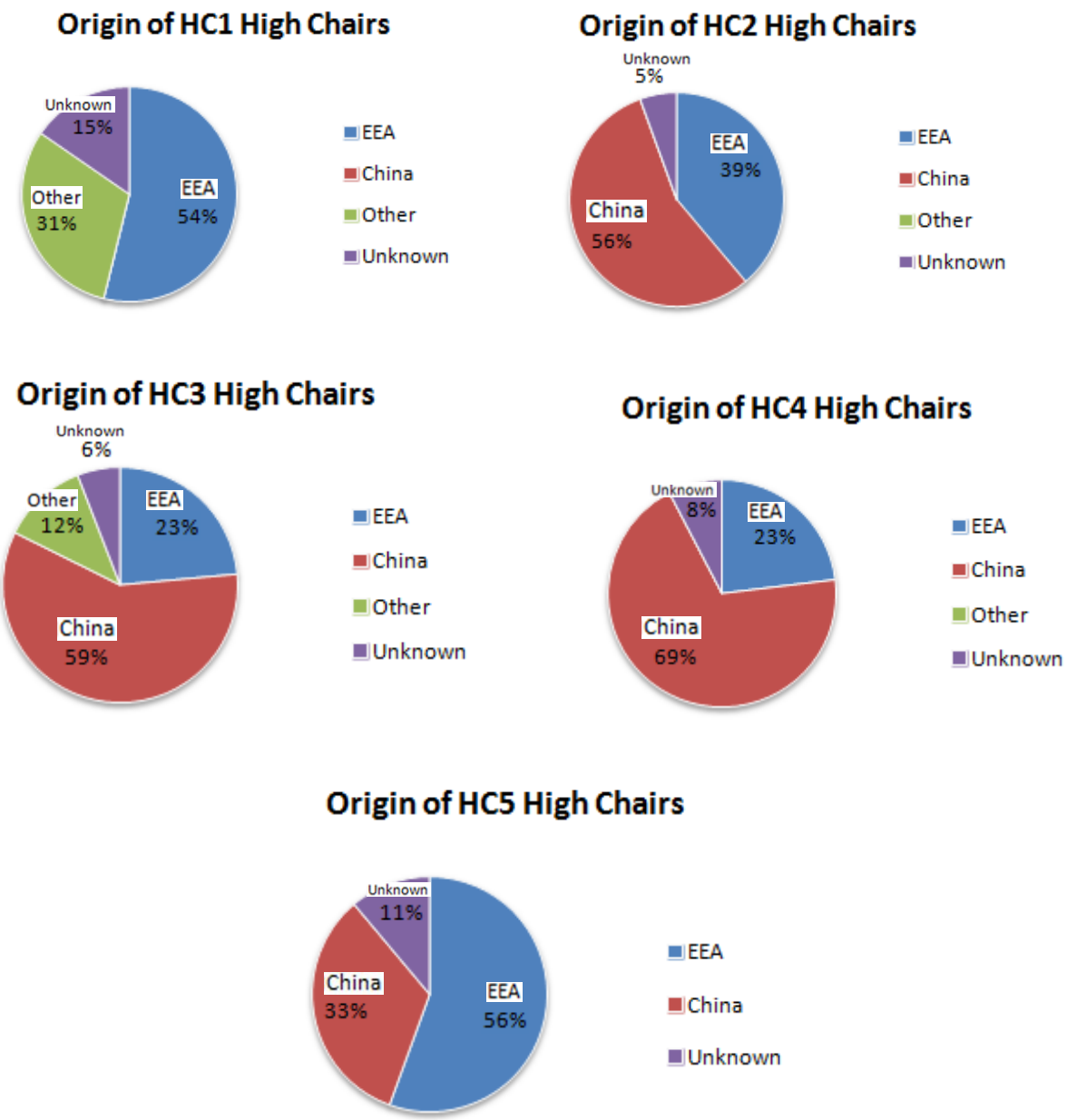

Figure 20 - Country of origin of the high chairs

According to the above figure,

- The traditional high chairs (HC1) and other types of high chairs (HC5) appear in their origin to be mostly European.respectively 54% and 56%
- The majority of foldable high chairs (HC2) and high chairs with adjustable backrest (HC3) are made in China.
- A large majority of the designer type high chairs (HC4) are of origin Chinese

6. Tests and Results

6.1 Conditions for Testing

In accordance with clause 4.1 of EN14988 part 2 high chairs have been tested as delivered.
The Knock-down type high chairs have been assembled according to the instructions supplied.
When instructions allowed for different adjustments or configurations of components (e.g. inclination of the backrest, height of the seat, position of the tray, position of castors/wheels, etc.), the most onerous combination has been used for each test.

6.2 Overall Test Results

IMPORTANT NOTE
One needs to remember that statistics and percentage(s) relating purely to test results should not in any way be interpreted as indicating any lack of safety levels within a product.
Ultimately, risk assessment needs to be done on each sample to determine the actual level of risk presented by that type of product.
This is discussed in Chapter 6 – Conclusions, where risk assessment and action / measures taken by market surveillance authorities are discussed.

General overview

Fig 21 gives an overview of the non-conformities found with the 70 samples when testing in accordance with EN14988+A1: 2012. It is to be noted that apart product information representing 67% of failures, the main issue associated with the safety of high chairs is stability (41% of non-complying products). The 3rd reason for failures shown to be on restraint systems.

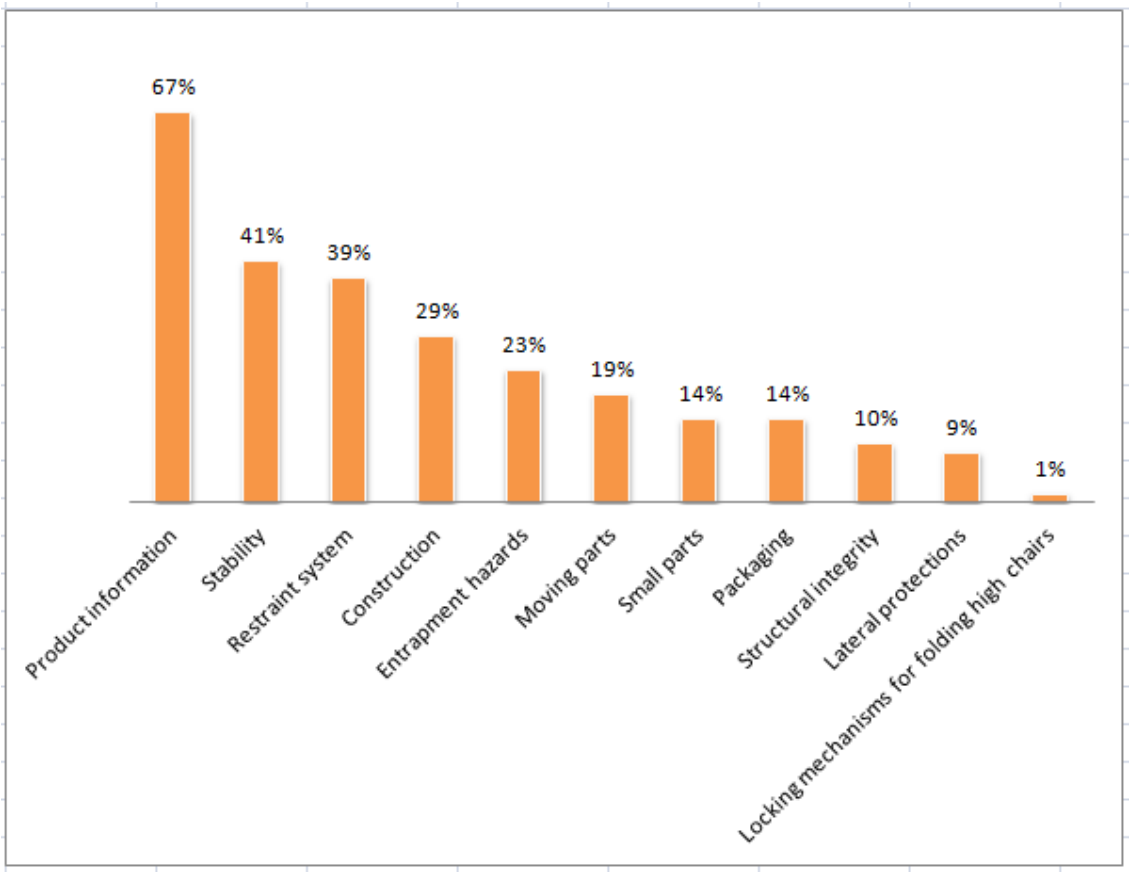

Figure 21 – General overview of test results for the 70 samples high chairs – EN 14988+A1: 2012

The details on the tests carried out will allow balancing these first data, taking into account the detailed results and the year of the standard the product claims compliance with.

When taking into account samples deemed to comply with EN14988: 2006 and meeting the relevant requirements for the restraint system the general overview appears as follows: product information is still the first cause of failure, the second one is about stability issues but as a 3rd cause of non-compliance the figures highlight defects in construction characteristics. Failure on restraint system represent only 10%.

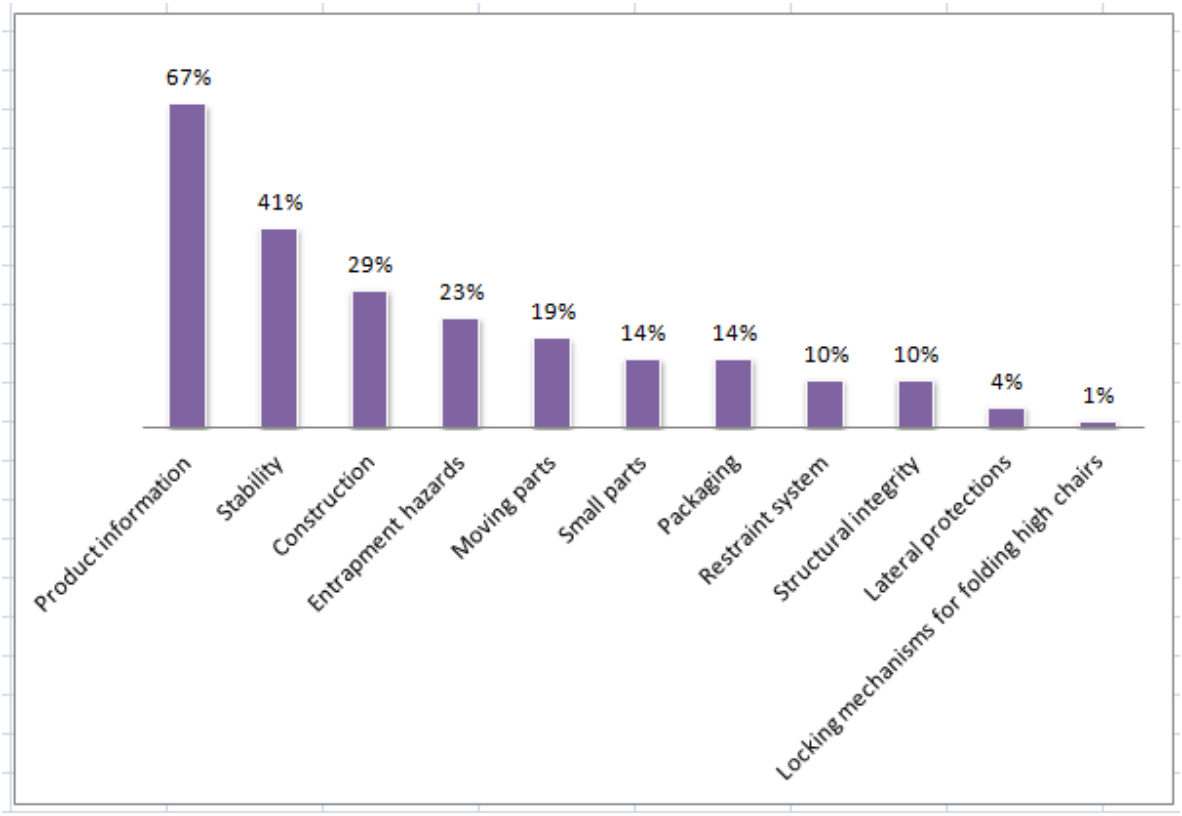

Figure 22 - General overview of test results for the 70 samples high chairs - EN14988+A1: 2012 or EN14988: 2006

As figure 22 depicts,

- the overall non-compliance of samples with respect to "Stability" requirements of both standards is up to 41%.The non-compliances on restraint system with respect to the standard EN 14988+A1: 2012 requirements (39%) in comparison to 10% non-compliance with the standard EN 14988:2006 reflect the non-adjustment of the market to the revised standard, on these requirements.
- Concerning lateral protections non-compliance with the requirements of the EN 14988 + A1:2012 present a 9% a little over double with respect to 4% non-compliance with the EN 14988 :2006

Decision of the Commission 2013/121/EU

In relation with the provisions of the Decision of the Commission 2013/121/EU following overall results were obtained.

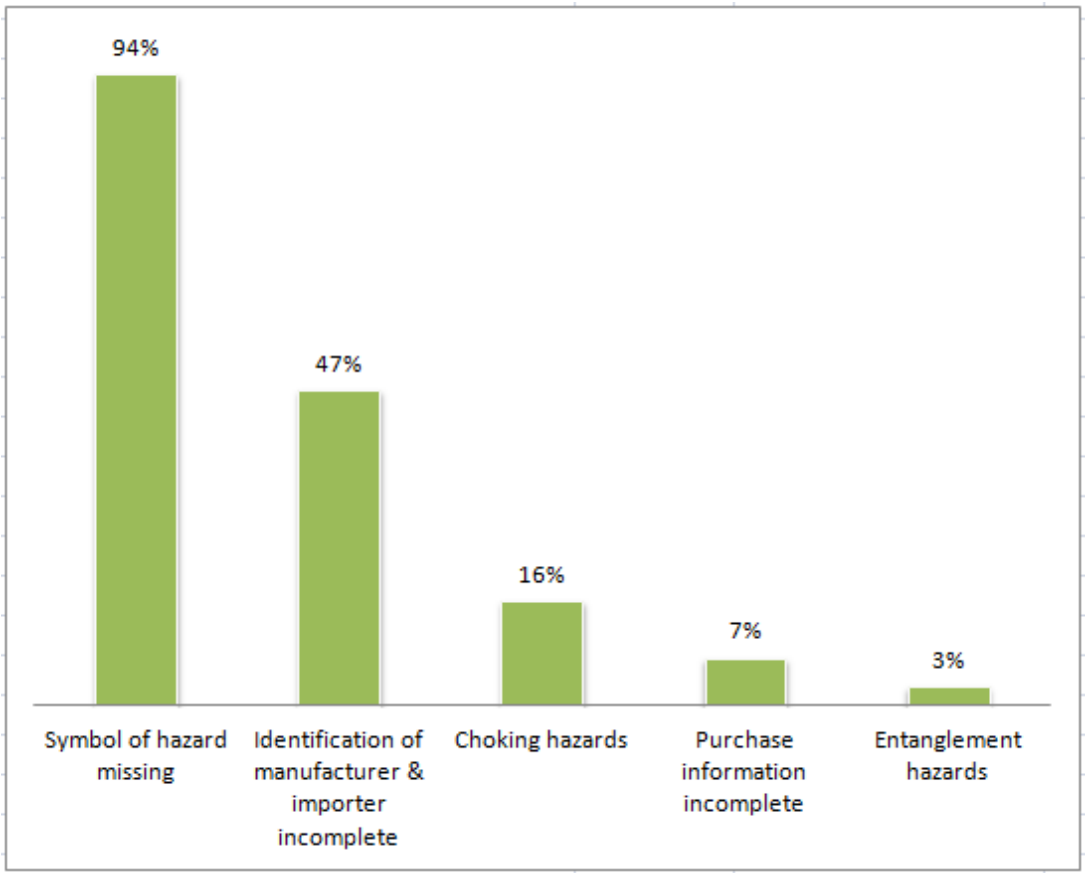

Figure 23 - General overview of test results for the 70 samples high chairs - Decision 2013/121/EU

With respect to the safety requirements choking hazards (16%) still present an issue on the market and entanglement hazards (3%) appear to be a residual issue; these safety issues indicate that the industry has worked on them.

Category 1 - Traditional high chairs

In the case of traditional high chairs, overview of test results for the 13 HC1 – High chairs can be shown as follows

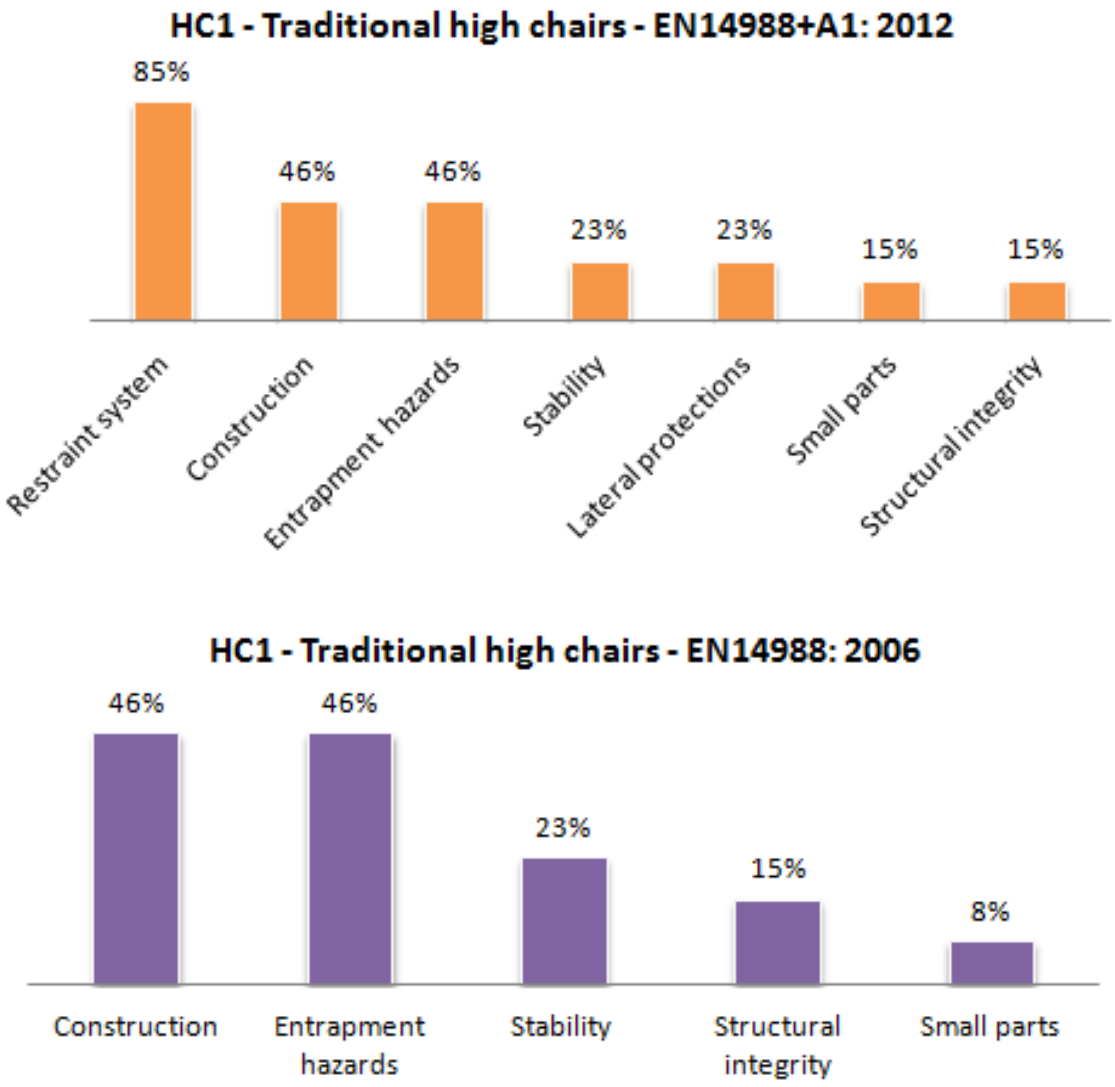

Figure 24 – Overview of results of HC1 high chairs

According to Fig.24,

- A large proportion (11 samples) of traditional high chairs (HC1) show non-compliance to the requirements on restraint system in accordance with the standard EN14988:2006 +A1: 2012
- They all meet the requirements when the standard EN14988:2006 is applied.
- The second and third cause of non-compliance are on construction and entrapment hazards, recorded on 6 samples out of 13.

Category 2 - Foldable high chairs

In the case of foldable high chairs, overview of test results for the 18 HC2 – High chairs can be shown as follows

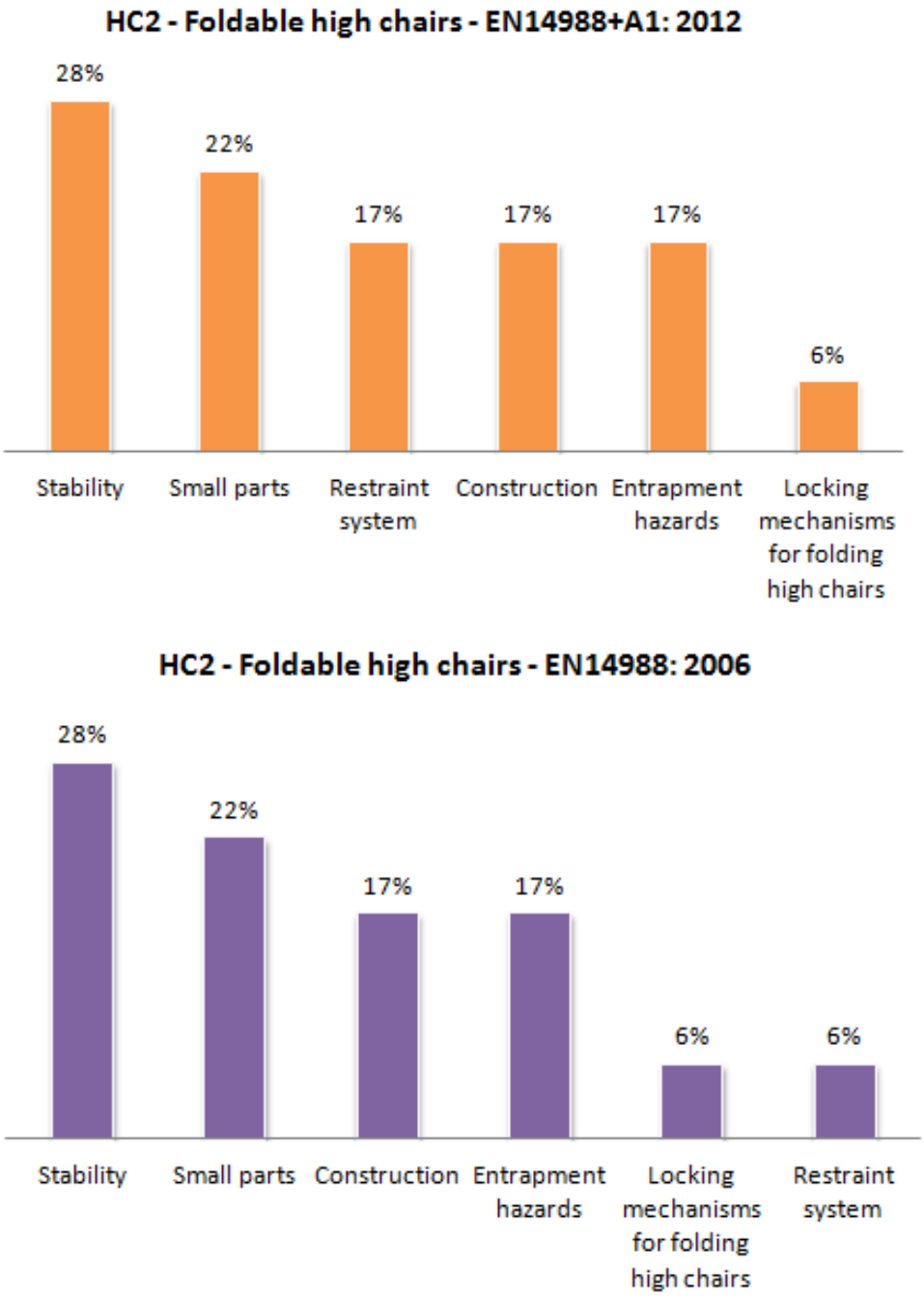

Figure 25 - Overview of results of HC2 high chairs

As shown in Fig. 25,

- The main issue for foldable high chairs (HC2) is the lack of stability (5 samples).
- This type of high chairs shown non-conformities on small parts (4 samples).
- Issues on the restraint system are due to publication of the amendment A1.

Category 3 - High chairs with adjustable backrest

The diagrams below show the overall non-conformities recorded on 17 high chairs with an adjustable backrest (HC3)

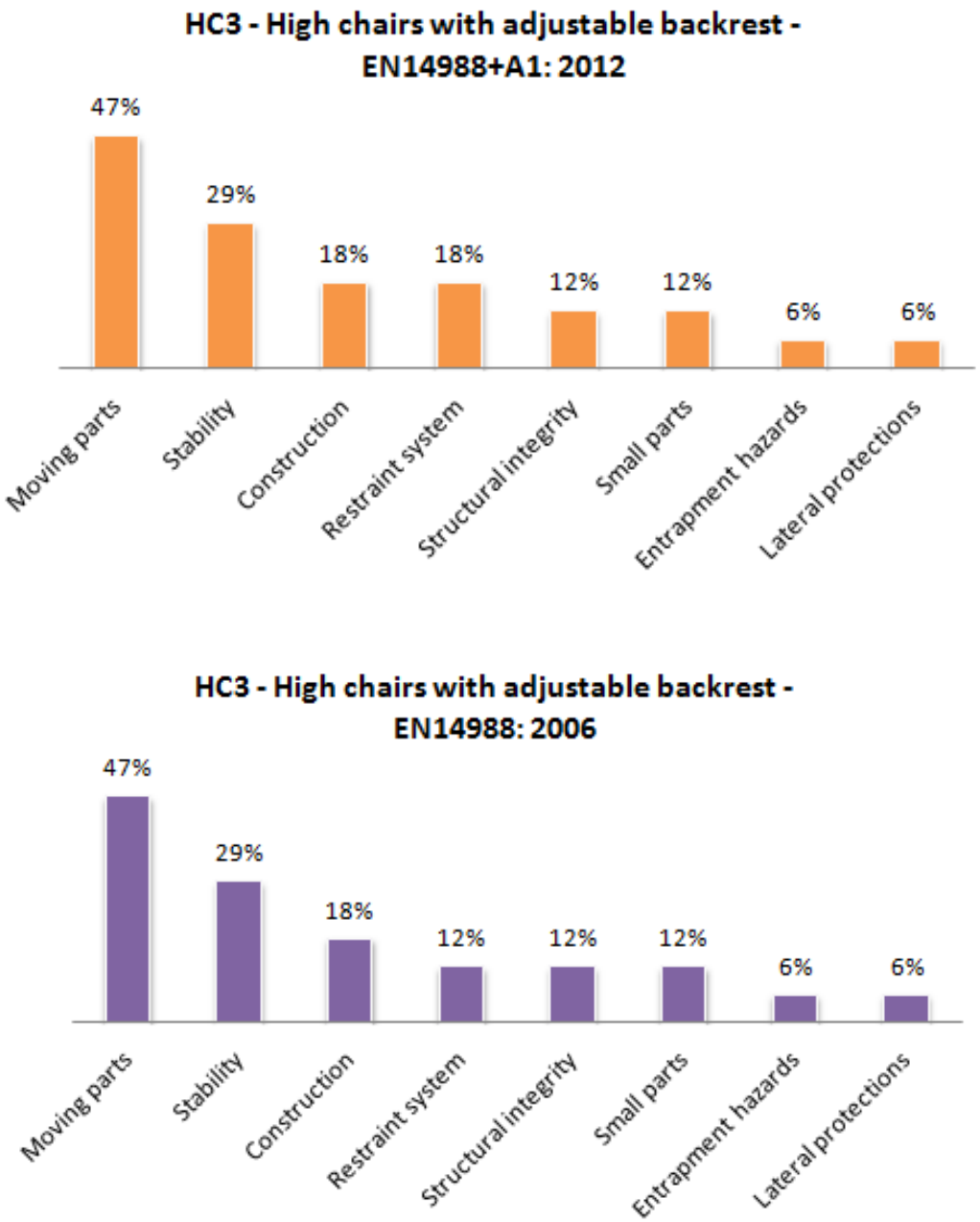

Figure 26 - Overview of results of HC3 high chairs

Figure 26, on the overview results on HC3 type chairs shows:

- The main issue for this type of high chairs is due to the adjustment of the tray on the armrests (8 samples).
- Stability is the second critical point (5 samples)

Category 4 - Designer type high chairs

When looking at overall results obtained for 13 Designer type high chairs (HC4) following non-conformities have been recorded:

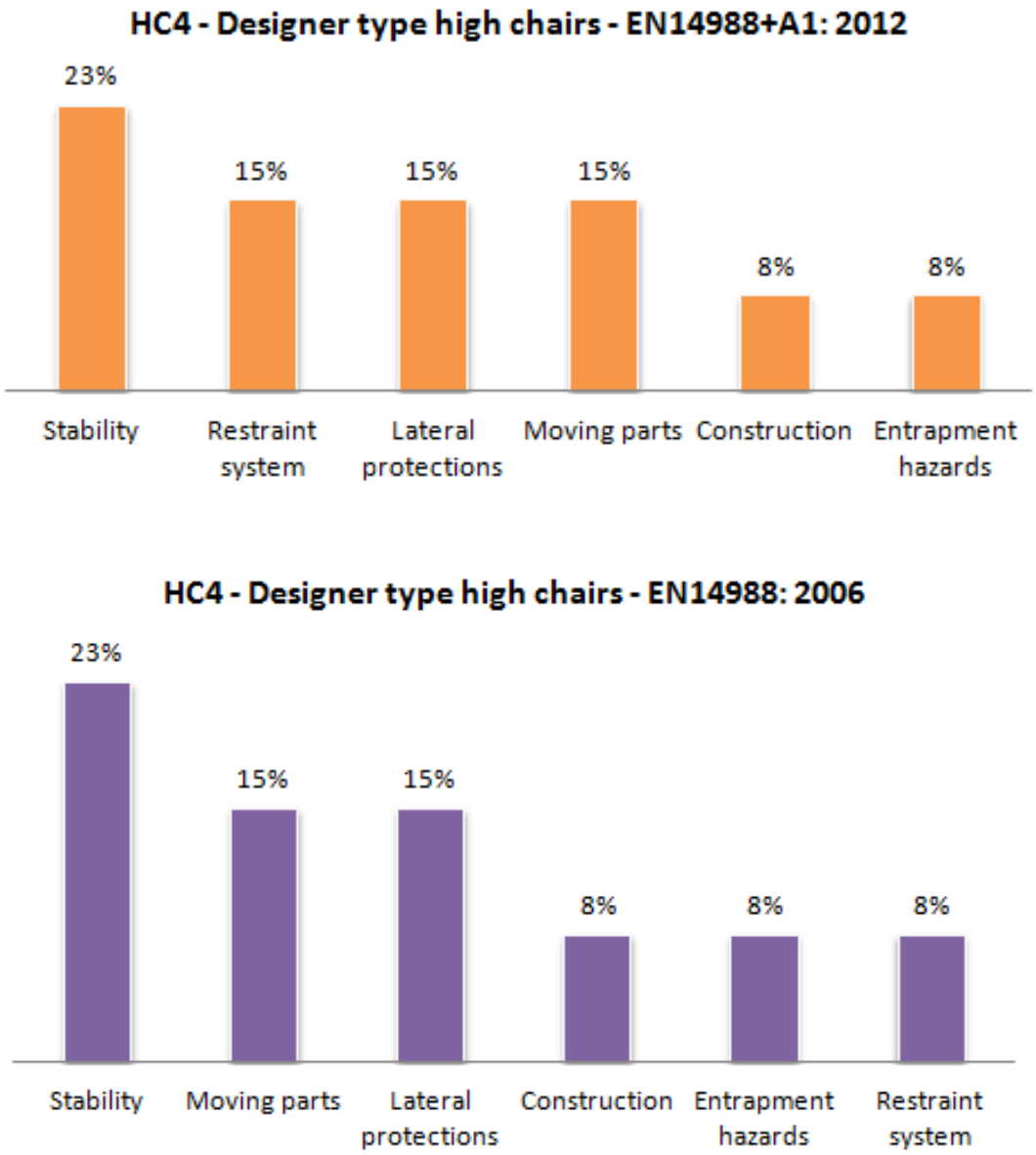

Figure 27 - Overview of results of HC4 high chairs

According to the above,

- Stability is the first cause of non-compliance for designer high chairs (3 products out of 13)
- The second issue: restraint system (2 non conformities) is reduced to just 1 product when the requirements of EN14988:2006 are applied.
- 2 products shown non-compliance for lateral protections, due to the design of the product.

Category 5 - Other types of high chairs

The last type of high chair HC5 - other types shown the overall results below, for 9 samples tested

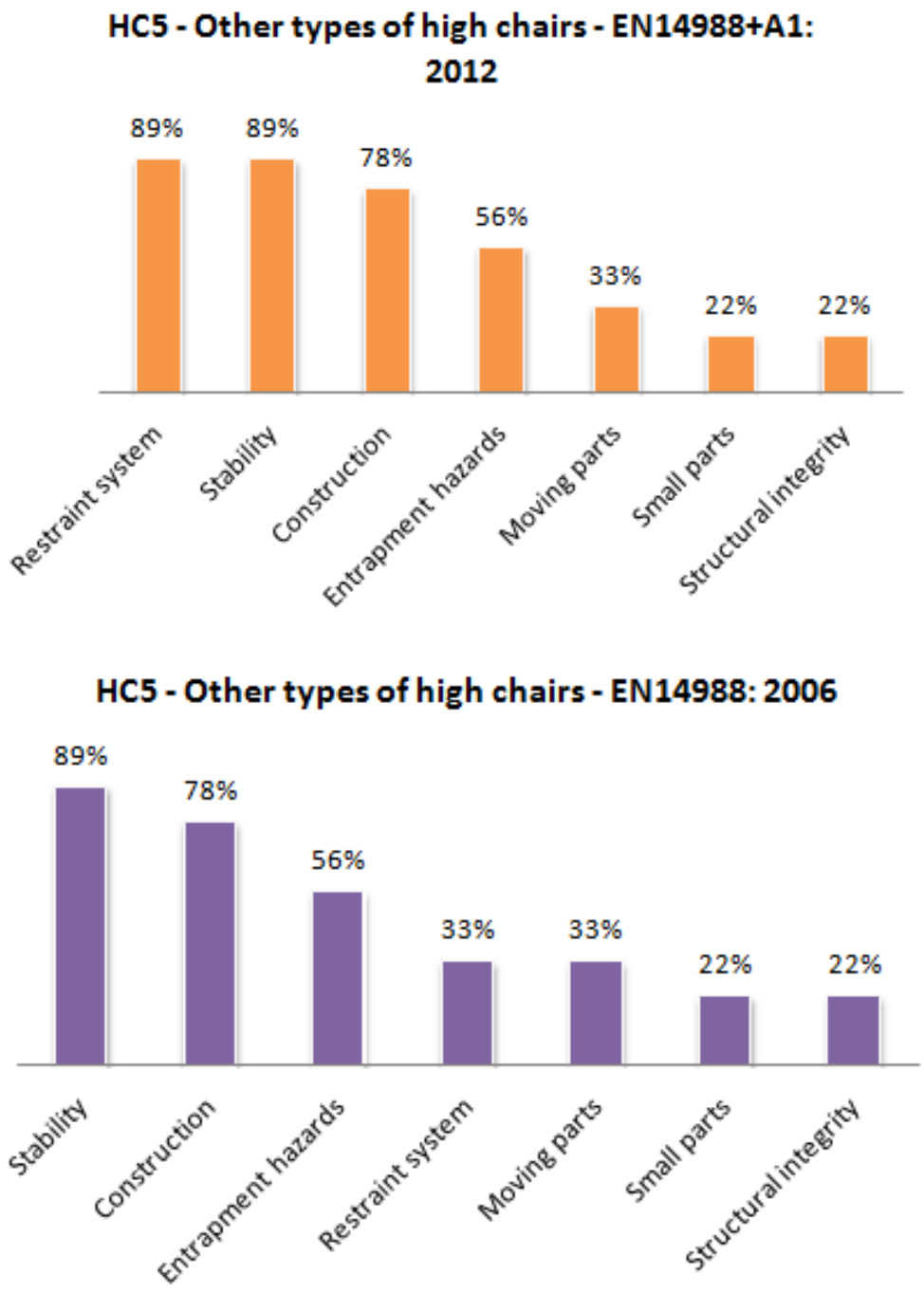

Figure 28 - Overview of results of HC5 high chairs

Regarding Fig. 28,

- This category show the highest number of non-conformities, with a main issue on stability for 8 samples out of 9.
- The requirements on the restraint system in accordance with EN14988:2006+A1:2012 are not met for 8 samples; 3 of them also fail the requirements of EN14988:2006
- The third issue for this category is on the construction (7 samples out of 9)

6.3 Analysis and Detail of Non-Conformities obtained: EN 14988

Mechanical requirements

An overall view of non-conformities - except for packaging and product information requirements show already a large number of non-conformities: ***21 out of a total of 70 samples (30%) passed all of the requirements*****. The rest, 70%, show different levels of non-compliances.**

From 27 samples that have been assessed to EN14988: 2006 they are claiming compliance with, 2 passed all applicable requirements as they shown other types of non-compliances as well.

.

Clause	Title	Number of failed samples	% non-conformities out of 70 samples
4, 5.1, 5.8, 5.10, 5.11	General, construction	21	30%
5.2	Holes gaps and openings	16	23%
5.3	Moving parts	13	19%
5.4	Locking mechanisms for folding high chairs	1	1%
5.5	Small parts	10	14%
5.6	Restraint system	27	39%
5.6 (*)	Restraint system - application of EN14988: 2006	7	10%
5.7	Lateral protection	6	9%
5.7 (*)	Lateral protection - application of EN14988: 2006	2	3%
5.9	Reclinable backrest	0	-
5.12	Structural integrity	7	10%
5.13	Durability of locking mechanisms	0	-
6	Stability requirements	24	34%

Overview of mechanical tests and requirement results obtained out of 70 samples tested

General / construction

All requirements related to assembly components such as screws, assessment of exposed edges and protruding parts; dimension (length and height) of the backrest, and the requirements on seat front edge and castors/wheels have been gathered in this section.

Clause	Title	Number of failed samples	% non-conformities out of 70 samples
4, 5.1, 5.8, 5.10, 5.11	General, construction	21	30%
4	Materials	0	-
5.1	General	9	13%
5.8	Backrest	2	3%
5.10	Seat front edge	10	14%
5.11	Castors and wheels	0	-

Results: 21 of 70 high chairs shown non-conformities to these requirements (30%)

Regarding the clause 5.1 – General; non-conformities relate to finishing of the product (for plastic high chairs) where plastic component are not well burred or chamfered and show burrs or aggressive edges; and for wooden high chairs to the use of self tapping screws for attachment of parts intended to be removed for the transformation of the product.

Figure 29 – Examples of burrs, self-tapping screws

10 high chairs have been found with the radius of the front edge of the seat being less than 5 mm.

Figure 30 – Example of front edge with a radius < 5 mm

Regarding clause 5.8 – Backrest, only 2 samples from category HC1 – traditional high chairs were found not meeting the requirement of a 250 mm height. Both products are similar in design.
One claims compliance with the EN14988: 2006 and the second one does not refer to any standard.

Entrapment hazards

Clause	Title	Number of failed samples	% non-conformities out of 70 samples
5.2	Holes gaps and openings	16	23%
	Finger entrapment	8	11%
	Entrapment of torso	8	11%

The clause 5.2 on holes, gaps and openings covers two different entrapment hazards.

Entrapment of fingers,
Entrapment of fingers is recorded in accessible holes comprised between 7 and 12 mm. This non-conformity has been recorded only on high chairs of category HC2, HC3,HC4 and HC5

New developments on finger entrapment and risk analysis may lead in the future (when the revision of the standard will be ready), to pass some of these spaces recorded as non-conformities, as not all will really generate an entrapment hazard.

Figure 31 - Example of opening that do not create a hazard: the shape of the hole allows fingers to escape easily

Figure 32 - Examples of openings that create an entrapment: completely bounded, no dimension allows movement of trapped fingers

Entrapment of torso

Entrapment of torso was recorded only on high chairs of category HC1 and HC5 (2 samples).

For high chairs where the seat is adjustable in height the issue can be easily solved by suitable instructions for assembly and use.

Figure 33 - Example of entrapment of torso

Moving parts

Clause	Title	Number of failed samples	% non-conformities out of 70 samples
5.3	Moving parts	13	19%
	During adjustment, squeeze and compression hazards due to powered mechanisms	2	3%
	Compression hazards due to movement of the tray	11	16%

The result show hazards from moving parts, mostly due to the softness and elasticity of the tray. Assessment was made by pushing the 5 mm gauge with a 30N force, to reproduce the action of external factors: parent leaning on the tray, another child pulling down … and the compression hazards created between armrest and tray.

Figure 34 - Example of compression hazard (squeeze point) found between tray and armrest

Some high chairs (only HC5 high chairs) are fitted with spring devices to allow transformation into a little chair attached to a table.
Two of them have shown squeeze points under the force of powered mechanisms.

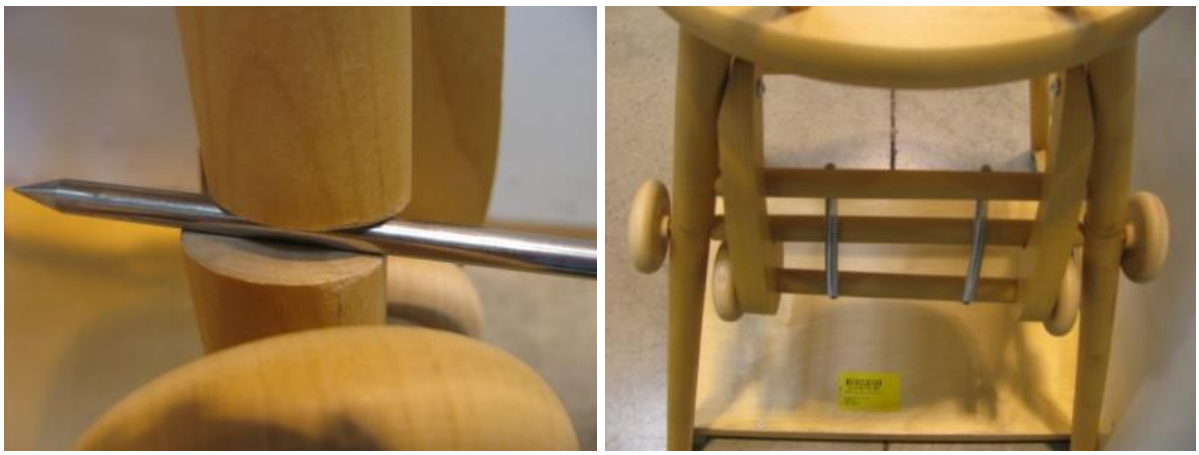

Fig 35 - Example of squeeze points under spring force

Locking mechanisms for folding high chairs

This requirement is generally met by the high chairs submitted to test: only 1 sample HC2 high chair failed the strength test (1%).

Small parts

Clause	*Title*	*Number of failed samples*	*% non-conformities out of 70 samples*
5.5	*Small parts*	*10*	*14%*

As the standard does not give any position on the product where small parts shall be looked at the whole products have been considered for this test.
10 samples released small parts, easily detachable in the case of harness adjusters or wooden caps; or that have been detached after a 90N force was applied: this is the case for plasticized labels or press studs.
In the case of labels it should be mentioned that they are usually not directly accessible to the child so the chance that they can be detached and swallowed is very low.

Figure 36 - Examples of small parts

Restraint system

Clause	Title	Number of failed samples	% non-conformities out of 70 samples
5.6	Restraint system	27	39%
5.6 (*)	Restraint system - application of EN14988: 2006	7	10%

Details on the non-conformities recorded for the restraint system

Non-conformities on restraint	HC1 11	HC2 3	HC3 3	HC4 2	HC5 8
Active restraint	1	2	1	1	
Passive restraint	10			1	5
General		1	2		3
Fails EN14988: 2006		1	2	1	3

16 non-conformities out of 27, are due to the **passive restraint system** (these provisions have been added by amendments, and high chairs may not have been modified to fulfil the new requirements). All of them meet the EN14988: 2006 standard.

Figure 37 - Example of non-conformities of passive restraint system

1 non-conformity is due to the lateral protections not meeting the requirement of relevant clause 5.7.

Figure 38 - Example of too low lateral protection

10 non-conformities have been recorded on **active restraint system**: slippage of straps and adjusters, lack of resistance to strength tests.

1 high chair from the category HC1 was fitted with an active restraint system, failing the requirement as the waist belt can be used without the crotch strap. This high chair meets the EN14988: 2006 standard on this point.

Figure 39 - Examples of active restraint system that did not meet the requirement

Lateral protections

Clause	*Title*	*Number of failed samples*	*% non-conformities out of 70 samples*
5.7	*Lateral protection*	*6*	*9%*
5.7 (*)	*Lateral protection - application of EN14988: 2006*	*3*	*4%*

High chairs from categories HC1, HC3 and HC4 show non-compliance with this requirement. From 6 samples, 3 of them also do not meet the requirement of EN14988: 2006.

Figure 40 - Example of lateral protections that did not meet the requirement

Structural integrity

Clause	Title	Number of failed samples	% non-conformities out of 70 samples
5.12	Structural integrity	7	10%
Tests EN14988-2 +A1			
6.2	Impact test	0	-
6.11	Seat vertical static load test	1	1%
6.12	Footrest vertical static load test	1	1%
6.18.1	Tray strength test	0	-
6.18.2	Tray vertical static load test and stability	1	1%
6.18.3	Tray drop test	4	6%

There were not so many non-conformities due to poor structural integrity. Most of them were due to the consequences of tray drop test. If such a failure shall be recorded as a non-conformity it shall be mentioned that for some samples a broken tray will not be used any more and should not pose any safety issue (unless it is part of the restraint function).

Figure 41 - Example of non-conformity to seat vertical static load test - crotch restraint detached from the horizontal element

Figure 42 - Example of damage after tray drop test

Stability

Clause	Title	Number of non-conformities	% non-conformities out of 70 samples
6	Stability requirements	29	41%
6.2	Sideways stability	10	14%
6.3	Rearwards stability	19	27%
6.4	Forwards stability	0	-
6.5	Footrest stability	0	-
6.6	Tray stability	0	-

Detailed results by type of high chairs show that the design of the high chair is not really critical to this requirement.

Only other type of chairs (which particularly having double functions) – type HC5 show a high number of non-conformities regarding the stability.

29 non-conformities	Traditional HC1	Foldable HC2	Adjustable backrest HC3	Designer type HC4	Others HC5
Do not comply Cl. 6	**3**	**5**	**5**	**3**	**9**
% out of HC per category	**23%**	**28%**	**29%**	**23%**	**89%**
Do not comply Cl. 6.2	1	2	1	1	0
% out of HC per category	8%	11%	6%	8%	
Do not comply Cl. 6.3	0	2	4	2	6
% out of HC per category		11%	24%	15%	67%
Do not comply Cl. 6.2 & 6.3	2	1	0	0	2
% out of HC per category	15%	6%			22%

Packaging

Clause	Title	Number of failed samples	% non-conformities out of 70 samples
7	Packaging	10	14%

Non-conformities to this clause mean the plastic packaging does not meet the requirements of EN71-1 (the thickness is less than 0,038 mm) and there is no warning in the language of the country where the high chair is sold.

Product information

Clause	Title	Number of failed samples	% non-conformities out of 70 samples
8	*Product information*	*47*	*67%*
8.1	*Marking of the product incomplete*	*12*	*17%*
	Absence of warning sentence or incorrect	*20*	*29%*
8.2	*Instruction for use incomplete or incorrect wording*	*25*	*36%*
	No instruction manual	*2*	*3%*
	NO TRANSLATION in the language of the country where the high chair is sold	*19*	*27%*

One of the most important reasons to assess a non-conformity on product information is the wording of warning sentences.

It was found out also, that 19 high chairs were sold without product information given in the official language of the country: 2 in Denmark, 1 in Estonia, 3 in Romania*, 5 in Finland (out of which 3 where only Swedish was missing), 2 in Norway, 2 in Lithuania, 3 in Latvia and 1 in Cyprus (Greek missing).

* One should note that samples provided by Romania where purchased from internet.

6.4 Details on Results obtained with the Decision 2013/121/EU

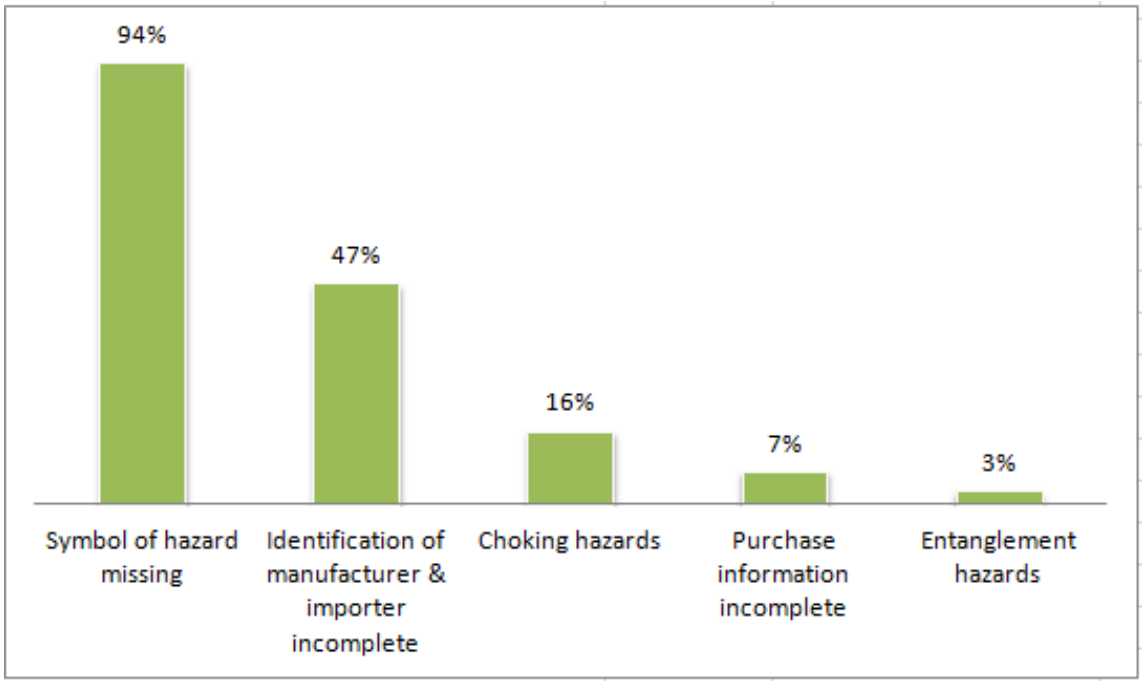

Figure 43 - Overview of results - Decision 2013/121/EU

Figure 43 show an overview of the results obtained with regards to Decision 2013/121/EU. The results show that the standard needs to be slightly completed to meet all provisions of the European decision. The symbol of hazard missing is not well defined in the Decision and should be linked to existing warning sentences.

European works have started already, to define and validate pictograms for the most important warning sentences listed in all standards related to Child Care articles and the result of this study may be used to comply with this statement of the decision.

6.5 Analysis and Details on EN 12790

Only 3 samples were found to provide a relevant reclined position and have been tested in accordance with applicable clauses of the standard EN12790.
All of them claimed compliance with EN12790 – and 2 passed all relevant requirements.

The only non-conformity found was on slippage of a high chair. This clause should not be applicable as it was intended to prevent dangerous displacement of a reclined cradle if put on a table or any other similar high support. This misuse is not foreseeable in the case of a high chair, where the baby is already at the right height for the parents.

Therefore the non-conformity here should not be recorded as any hazard.

7. CONCLUSIONS

As stated earlier on in this document, the test results only show the level of non-compliance / failure rates with certain clauses of the respective European Standard. Ultimately, market surveillance authorities had to perform risk assessment in order to identify the level of risk found within each product.

When it came to risk assessment, all market surveillance authorities adopted the same methodology as indicated by the RAPEX Guidelines, Commission Decision 2010/15/EU.

Additionally, all market surveillance authorities were asked to ensure that officers involved in risk assessment updated themselves and took a look at the latest PROSAFE E-learning Portal on risk assessment. This was in order to ensure that everyone had more or less the same basic level of knowledge and understanding when it came to utilizing this methodology.

7.1 Risk Assessment – General Outcome

In June 2014, a special CCA working group meeting was held in Aix-en-Provence at the laboratory of SGS in order to discuss the test results and also to analyse and compare risk assessment methodology and results. The participating authorities felt that this was a very useful session since they all had the opportunity to directly discuss certain technical issues with the laboratory whilst looking directly at the respective samples that were tested. Additionally, it was found that it was easier to discuss risk assessment issues as the test samples were physically present during the meeting as well.

The table below, extracted from the European Commission guidelines on risk assessment, depicts the two main factors leading to risk assessment: (i) the severity level of the injury and (ii) the probability of damage occurring during the foreseeable lifetime of the product. Most market surveillance authorities struggled when it came to identifying the probability factors. However, during the CCA meeting at SGS laboratory in Aix-en-Provence, each sample was discussed with all the group as well as the SGS experts. This helped to come up with a common approach in relation to probability factors for varying scenarios, which in turn ensured a more synergised approach to risk assessment.

Risk level from the combination of the severity of injury and probability

Probability of damage during the foreseeable lifetime of the product		Severity of injury			
		1	2	3	4
High	> 50 %	H	S	S	S
	> 1/10	M	S	S	S
	> 1/100	M	S	S	S
	> 1/1 000	L	H	S	S
	> 1/10 000	L	M	H	S
	> 1/100 000	L	L	M	H
	> 1/1 000 000	L	L	L	M
Low	< 1/1 000 000	L	L	L	L

S — Serious Risk
H — High risk
M — Medium risk
L — Low risk

Although the risk assessment methodologies used were the same, this did not mean that the results were exactly the same throughout all the participating Member States. Certain risk scenarios developed by the participating authorities could be slightly different to one another. This may have been partly due to cultural differences in how high chairs are actually used within various Member States.

One thing that needs to be addressed at a European level was the lack of accident data that was available. If such data was available, this would really improve the situation and further ensure that project results were backed up by concrete evidence when assessing the probability factors for accidents happening. Participating authorities and external stakeholders are both totally in agreement on the importance of having an updated European accident database.

Figure 44 below, provides an overview of the risk levels found within the 70 samples tested by this working group.

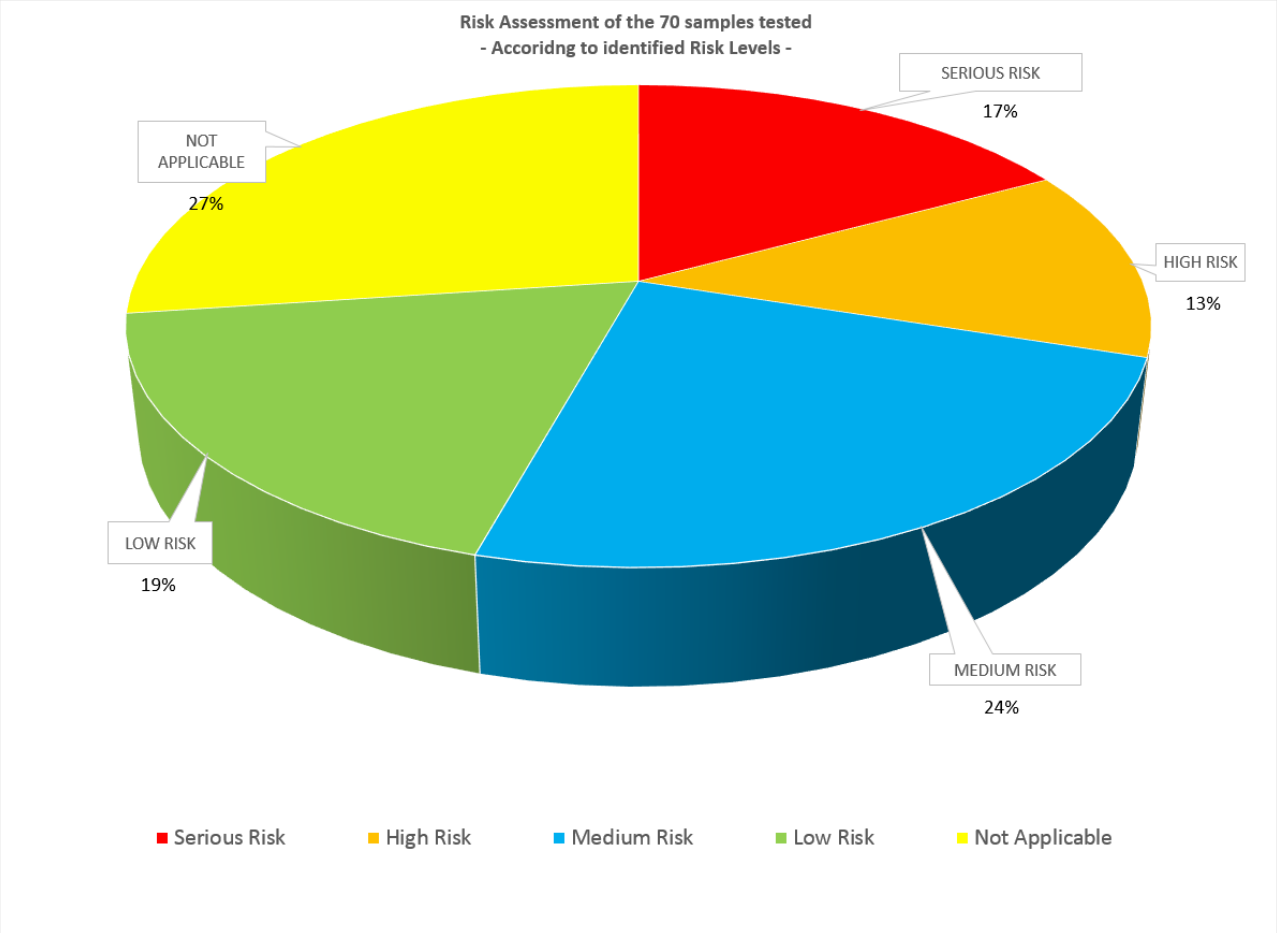

Figure 44, Risk Assessment levels of the 70 samples tested, as identified by ms authorities

Overall, the majority of products were found to be in low-medium risk area. Around 27% were considered by ms authorities to have either negligible or no risk at all. Another 19% were found to have low risk whilst an additional 24 were found to have a medium risk. This constitutes a total of 70%.

The remaining 30% of the samples had considerable risks. 17% of all samples were classified as having 'serious risk' whilst the remaining 13% were found to have 'high risk' factor.

It is important to note that in the case of serious risk, the ms authorities are obliged to inform the European Commission about this risk via the RAPEX system as an Article 12 Notification. Eventually, all 12 samples constituting the 17% will be published in RAPEX, some of which have in fact already been published. This ensures that consumers are also fully aware of these dangerous products.

When one analyses the type of failures found within the samples that have been found to have a serious or a high risk, one immediately finds that the main physical failures were related to the restraint system, out of which a number of samples failed both the 'latest 2012 version' as well as the 'older 2006 version' of the respective clauses within the standard. Other failures found in these samples were stability, in particular, rearwards and sideways stability. If a child is able to stand up or move too freely within a high chair due to an ineffective restraint system, the child may fall directly on the ground or due to the extra motion from the child, the high chair may become unstable and consequently falls just the same on the ground. This becomes even more serious if the stability of the high chair itself is not that good. Therefore, these two important elements, the restraint system and stability, especially when combined together, may cause severe injuries and leads to considerable riskshigh or serious risk".

7.2 Risk Assessment – Analysis by high chair categories

When one takes a look at the risk assessment results from the 5 categories, certain possible trends may become evident. However, it is important to state from the start that the scope of this project was NOT to try to find differences between the various types of high chairs. Indeed, the small number of samples may be not enough to come up with any real and concrete deductions. However, it may still be interesting to note the possible differences in the level of risk found within each category.

Figure 45 below shows the level of various levels of risk found within each category as identified by the respective market surveillance authorities. This information is divided into two tables.

Risk Levels according to Categories (Actual number of samples)					
	HC1 - Classic / Traditional High Chairs	**HC2** - Foldable High Chairs	**HC3** - High Chairs with Adjustable Backrest	**HC4** - Designer High Chairs	**HC5** - Other type of High Chairs
Serious Risk	2	1	4	0	5
High Risk	3	1	1	1	3
Medium Risk	4	6	4	2	1
Low Risk	3	3	2	5	0
Not Applicable	1	7	6	5	0
TOTAL	**13**	**18**	**17**	**13**	**9**

Risk Levels according to Categories (Percentage levels within each category)					
	HC1 - Classic / Traditional High Chairs	**HC2** - Foldable High Chairs	**HC3** - High Chairs with Adjustable Backrest	**HC4** - Designer High Chairs	**HC5** - Other type of High Chairs
Serious Risk	15%	6%	24%	0%	56%
High Risk	23%	6%	6%	8%	33%
SUB-TOTAL	**38%**	**11%**	**29%**	**8%**	**89%**
Medium Risk	31%	33%	24%	15%	11%
Low Risk + NA	31%	56%	47%	77%	0%

Figure 45, Risk Assessment levels of the 70 samples tested, as identified by ms authorities

The first part shows the actual number of samples found within each category for each type of risk. The second part of the table (further below) shows the percentage levels within each category for each type of risk.

The results tend to show that the traditional /classic type of high chairs (HC1) as well as those classified under HC5 (other type of high chairs which particularly include dual functions) have the highest risk. Indeed, **38%** of the samples within HC1 were classified as having either a serious or high risk. In the case of HC5 samples, this percentage is much higher and goes up to **89%**.

The other categories, HC2 – foldable high chairs, HC3 – high chairs with adjustable backrest and also HC4 - designer-type of high chairs do not seem to have such considerable risks when compared to the other two categories although in the case of HC3, 24% of the samples within that category had serious risk.

Further analysis may need to be done in order to ascertain whether this is just a fluke within the current batch of 70 samples that were tested or a possible trend in such categories. However, market surveillance authorities and even economic operators may be interested to note these differences at this point in time.

7.3 Risk Assessment – Analysis according to the standard as declared by manufacturers

Another interesting point to note is the level of risk found when one compares the samples into three other different types of categories. In this case, all the 70 samples were grouped into the following three categories:

(i) Those samples which were declared by the manufacturer as being in line with the latest version of the standard – EN 14988:2006+A1:2012. *(Refer to Figure 46 below)*

(ii) Those samples which were declared by the manufacturer as being in line with the older version of the standard – EN 14988:2006. *(Refer to Figure 47 below)*

(iii) Those samples which were NOT declared by the manufacturer and therefore did not have any label showing any reference to any standard on the high chair itself. *(Refer to Figure 48)*

Within the first category there were 17 such samples. In the second category there were 41 other samples and in the third category there were 12 other samples. The results within the three figures shown further below are quite interesting since it is quite evident that the risks found within the first category are much less than those found within the other two categories.

If one were to add the 'high risk' and 'serious risks' together, the results in the figures below show that in the first category (those which were declared by the manufacturer as being in line with the latest version of the standard – EN 14988:2006+A1:2012), there are **18%** of the samples within this category which have been identified as having either a 'serious risk' or a 'high risk'.

Looking at those samples where the manufacturer declared the samples as being in line with the older version of the standard (EN 14988:2006), the percentage levels of the same type of risks, that is, 'serious risks' and 'high risk' samples, increase to **27%**.

Furthermore, if one looks at the samples where the manufacturer did NOT even declare the samples as being in line with a particular standard, the risk levels of 'serious risk' and 'high risk' samples dramatically increase to **59%** ! This is twice as high as those that have been declared by the manufacturer as being in line with the older version and three times higher than those that have been declared by the manufacturer as being in line with the latest version of the standard.

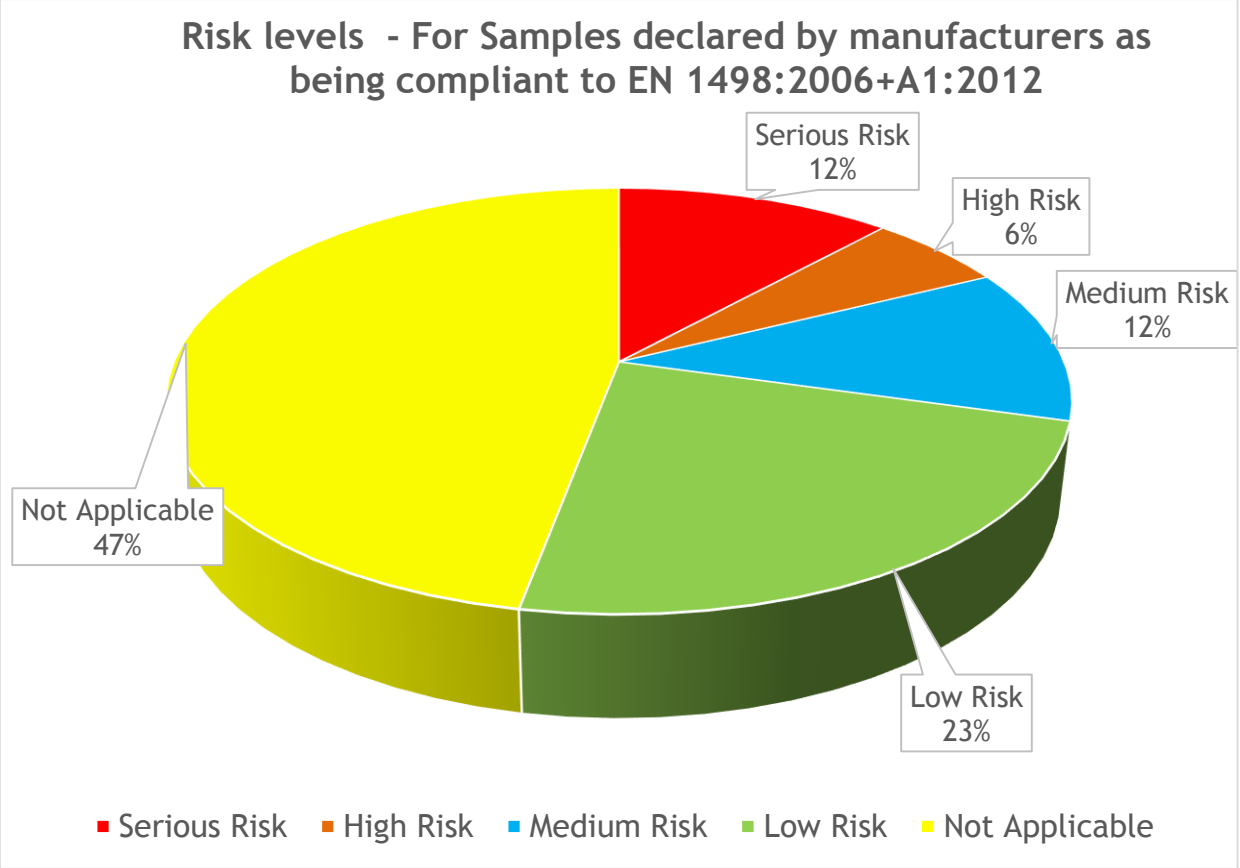

Figure 46, Risk Assessment levels (EN 14988:2006+A1:2012) Samples

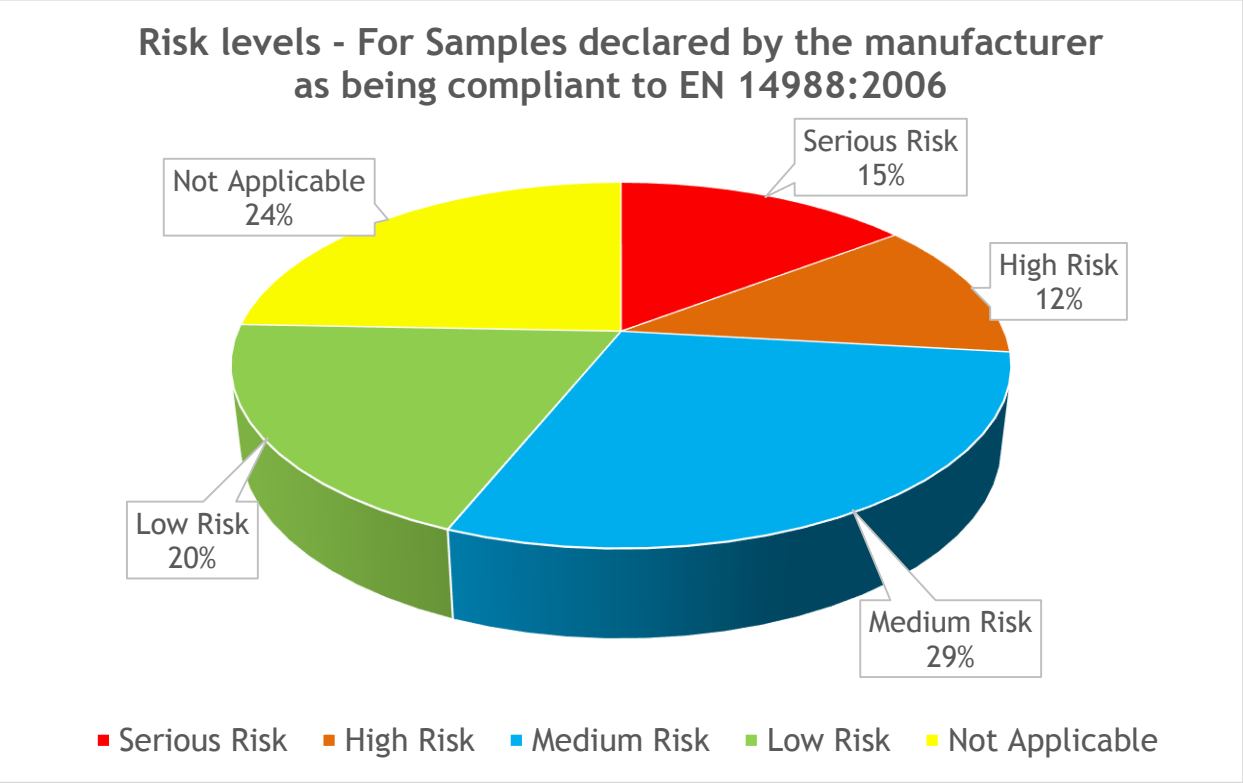

Figure 47, Risk Assessment levels (EN 14988:2006) Samples

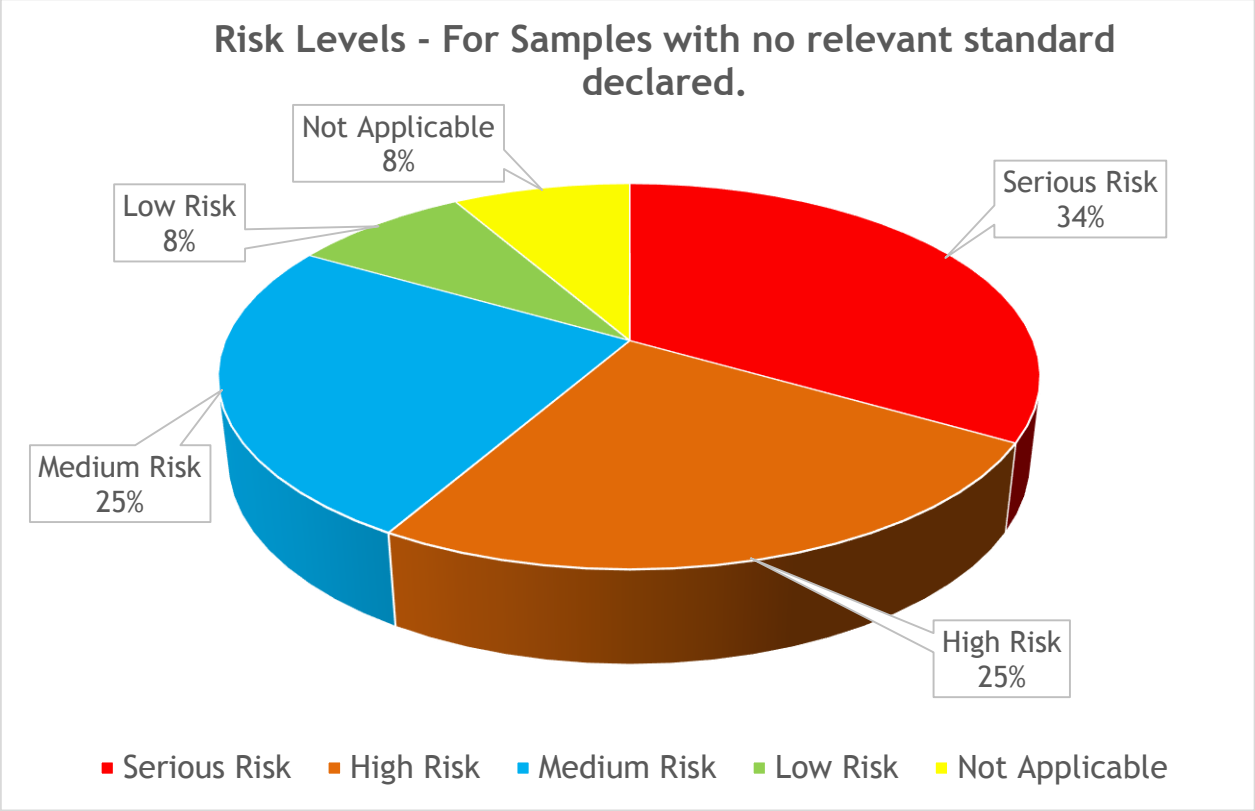

Figure 48, Risk Assessment levels (No Relevant Standard declared on Samples)

To conclude, it may be interesting for market surveillance authorities to note the above mentioned findings, in particular, for those samples that are found not to have any kind of declaration. This is because such samples tend to usually have more problems and it seems that there are much higher probabilities that such high chairs tend to not only have various non-compliances but also may have higher possibility of significant risk.

This may also be useful to note by Customs authorities since it may be relatively easy for them to focus and identify those high chairs which do not have a label specifying the respective standard. In such cases, such samples should be alerted to the respective market surveillance authorities for further investigations and analysis.

7.4 Risk Assessment levels - by Country of Origin

In this section, an attempt is made to try to check whether some form of deductions can be concluded from the data related to country of origin and the respective risk levels.

First of all, it is important to note what this report is intending to mean by 'country of origin'. This is the name of the country shown on the label of the high chair where usually the manufacturer address is situated. This is where the responsibility lies and therefore this is what is being taken into consideration here.

Therefore, to give an example, if a manufacturer within an EEA Member State fixes a label on the high chair showing that the high chair is manufactured within that Member State, that is the country that is being taken into consideration, irrespective of whether that manufacturer actually has some far east production line for its high chairs.

Figure 49 gives a breakdown of all tested 70 high chairs by country of origin. It is interested to note that both EEA and China are by far the most predominant groups, amounting to 37% and 46% respectively.

If one includes China with the rest of the samples having an Asian origin, the total will add up to 54% (46% + 8%), which is just over half of the samples tested within this project.

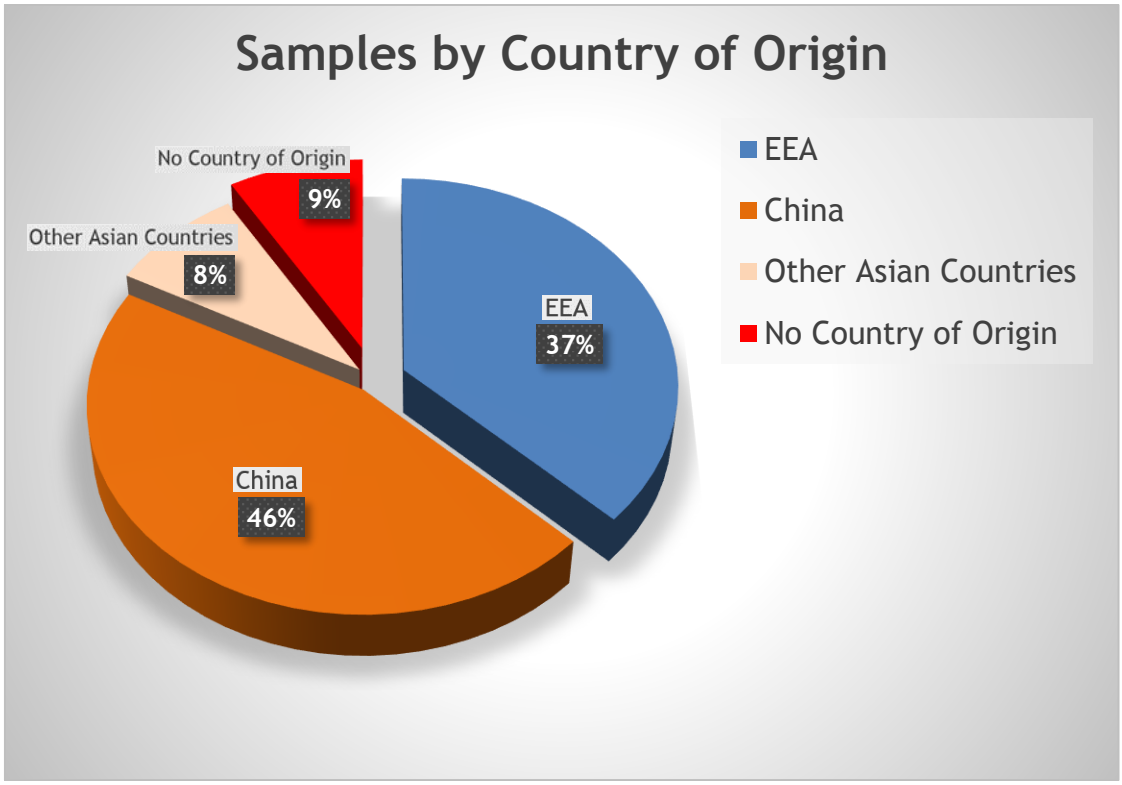

Figure 49, Breakdown of Samples according to Country of Origin

On the next page, one finds some further breakdown of this information. Figure 50 shows the risk levels (in percentages) of all the EEA samples. One immediately notices that the EEA samples identified as having 'serious risk' and 'high risk' constitute **38%** of all the samples (19% for 'serious risk' and another 19% for 'high risk' samples.

On the other hand, Figure 51 shows the risk levels (in percentages) of all samples originating from China. In this case, it is interesting to note that although more samples have been taken from this group, the actual risk levels are much less than those shown within EEA samples. Indeed, if you compare the risk levels between the two groups, the risk level of samples originating in China is only **18%** for all 'serious risk' and' high risk levels.

Figure 52 tries to give a more detailed overview of all the risk levels within the respective areas.

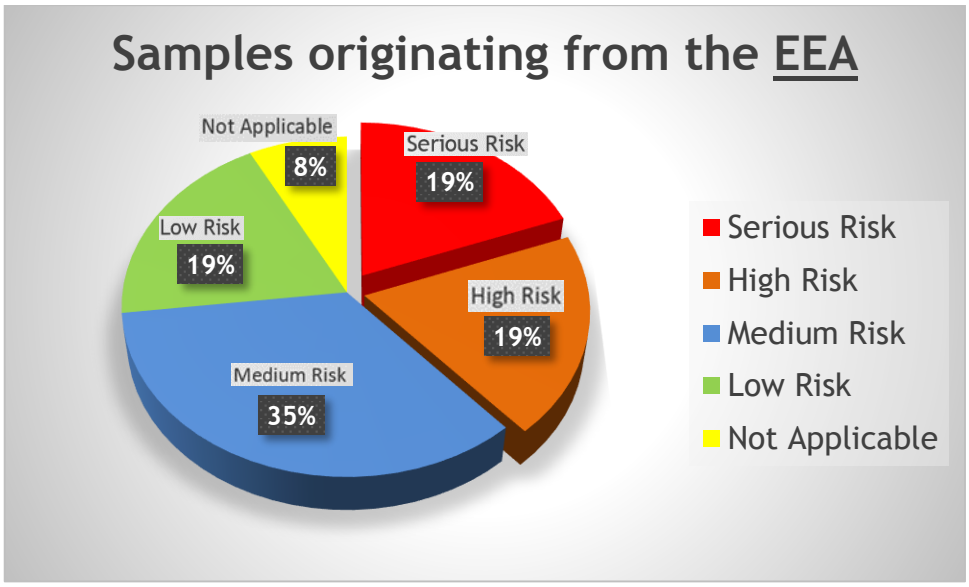

Figure 50, Samples originating from EEA showing different risk levels

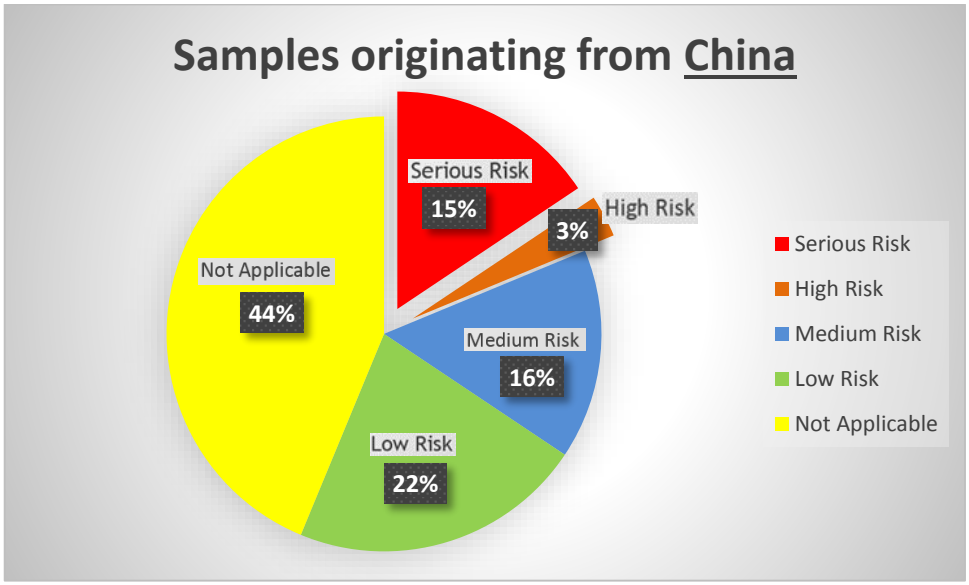

Figure 51, Samples originating from China showing different risk levels

	EEA	China	Other Asian Countries	No Country of Origin
Serious Risk	19%	15%	17%	17%
High Risk	19%	3%	17%	33%
Medium Risk	35%	16%	32%	17%
Low Risk	19%	22%	17%	0%
Not Applicable	8%	44%	17%	33%
	100%	**100%**	**100%**	**100%**

Figure 52, Overall Risk Levels (in percentages) of different countries of origin

If one were to further analyse Figure X8, one can also notice that those samples with 'no country of origin' shown on the label of the high chair have got the highest total of 'serious risk' and 'high risk' levels, amounting to **50%**, half of all the samples within this category.

However, before really arriving at any conclusions, one needs to further assess some more data. Figure 53 shows the risk levels that were found in just those high chairs which were classified as HC1 – traditional / classic high chairs AND HC5 – other high chairs having mainly dual functions. From earlier analysis within this chapter, it is clear that these two categories had the highest risk factors and therefore it is interesting to better analyse the same country of origins by just focusing upon these two categories only.

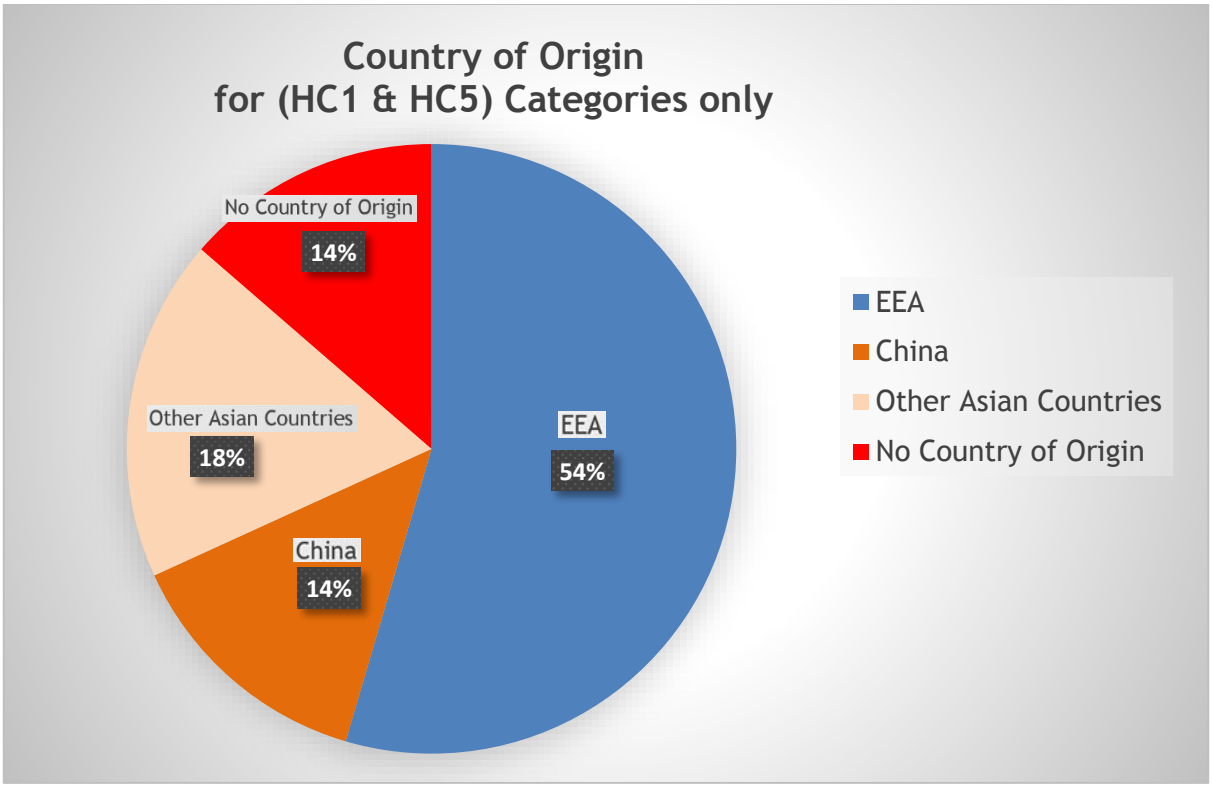

Figure 53, Breakdown of Samples according to Country of Origin for HC1 & HC5 Categories

From the pie chart above, it is clear that these two categories have been predominantly made up of samples originating from the EEA. In fact, 54% of all samples originated from the EEA. This may tend to already explain why the risk factors related to EEA samples was higher than, for example, samples originating from China.

Furthermore, looking at Figure 54, Figure 55 and Figure 56 further below, one immediately notices a completely different trend emerging. Looking at risk levels related to samples originating from EEA and those originating from China, one notices that in the case of EEA samples, the risk level for 'serious risk' is **25%** whereas all the HC1 & HC5 samples originating from China were **all** classified as 'serious risk'.

To conclude, it is very difficult to emerge any particular trends from such small samples. Additionally, the scope of this project, as mentioned earlier on, was not to try to determine these percentages but rather to just remove any unsafe products found within the Single Market. One needs to be very careful when looking at figures since just by looking at one figure the result might show one thing but when you see other figures the results change completely. What is important here is to possible show that market surveillance authorities have, rightly so, focused upon those high chairs with showed possible non-compliances to the standard and possible risk factors, rather than focusing on any particular country of origin. It is important for inspectors not to be biased by the country of origin when inspecting samples since irrespective from where it originates, it may still have considerable risk. Having said that, those samples with no country of origin showed higher risk levels and therefore, it may still be a good indication that there could be considerable risk within such samples.

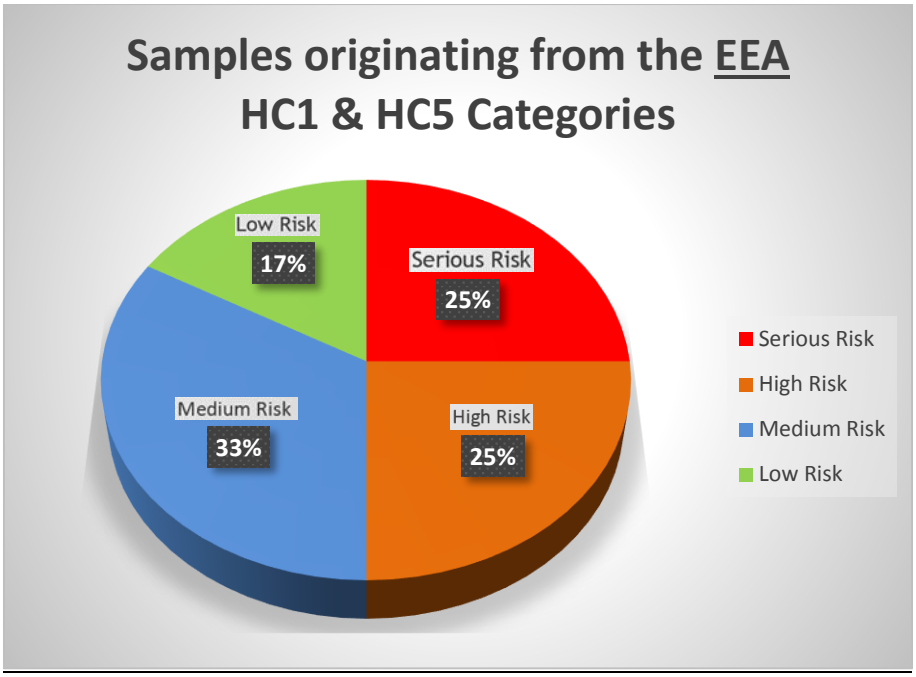

Figure 54, HC1 & HC5 Samples originating from EEA - showing % risk level

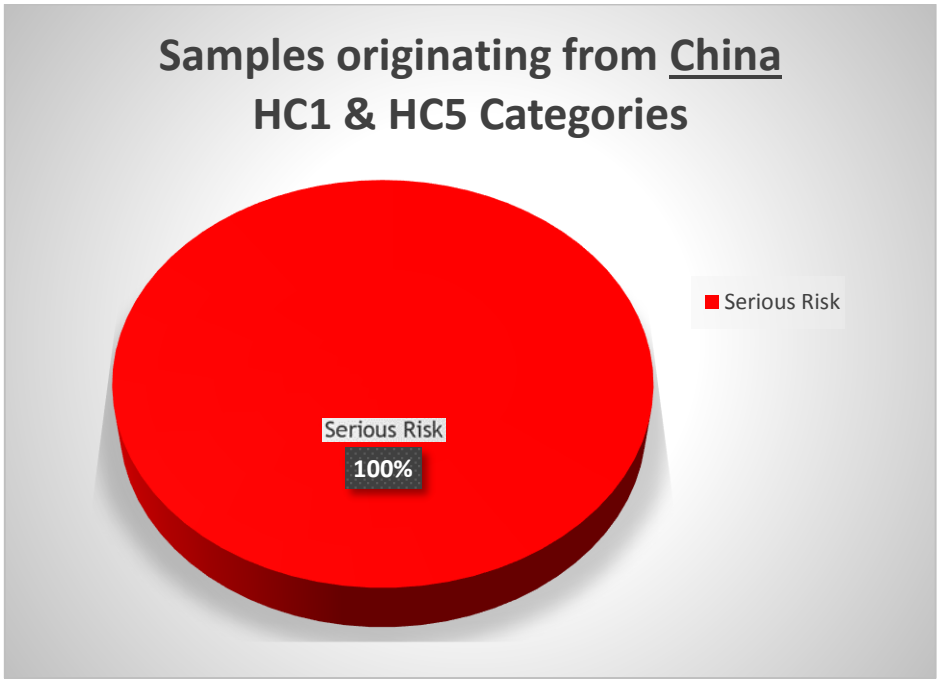

Figure 55, HC1 & HC5 Samples originating from China - showing % risk levels

	EEA	China	Other Asian Countries	No Country of Origin
Serious Risk	25%	100%	0%	33%
High Risk	25%	0%	25%	67%
Medium Risk	33%	0%	25%	0%
Low Risk	17%	0%	25%	0%
Not Applicable	0%	0%	25%	0%
	100%	100%	100%	100%

Figure 56 Overall risk levels for HC1 & HC5 Samples originating from different countries of origin

7.5 Actions and Measures taken

Similar to what has taken place in the previous joint action on childcare articles, it is very positive to see that the cooperation between economic operators and market surveillance authorities in most cases was very solution focused in order to eliminate the risks with products.

Out of the 70 samples, no action was taken on 12 of the samples. This is usually the case where there are no safety issues found within the product itself or the risk is so minimally low that no further action is required at that point in time.

Out of the remaining 58 samples, **81%** of all the samples that had some kind of measures taken were actually taken voluntarily by the economic operators, in coordination with the respective market surveillance authorities. An additional **16%** of all samples are still in a 'work-in-progress' phase by the respective market surveillance authorities. This means that the actual final statistical figures for voluntary action may even be higher than that shown above. Overeall this is a very positive sign and shows that the action and measures taken by market surveillance authorities were understood and acted upon by the majority of the economic operators.

Figure 57 shows a breakdown of the measures and action taken by the market surveillance authorities and economic operators.

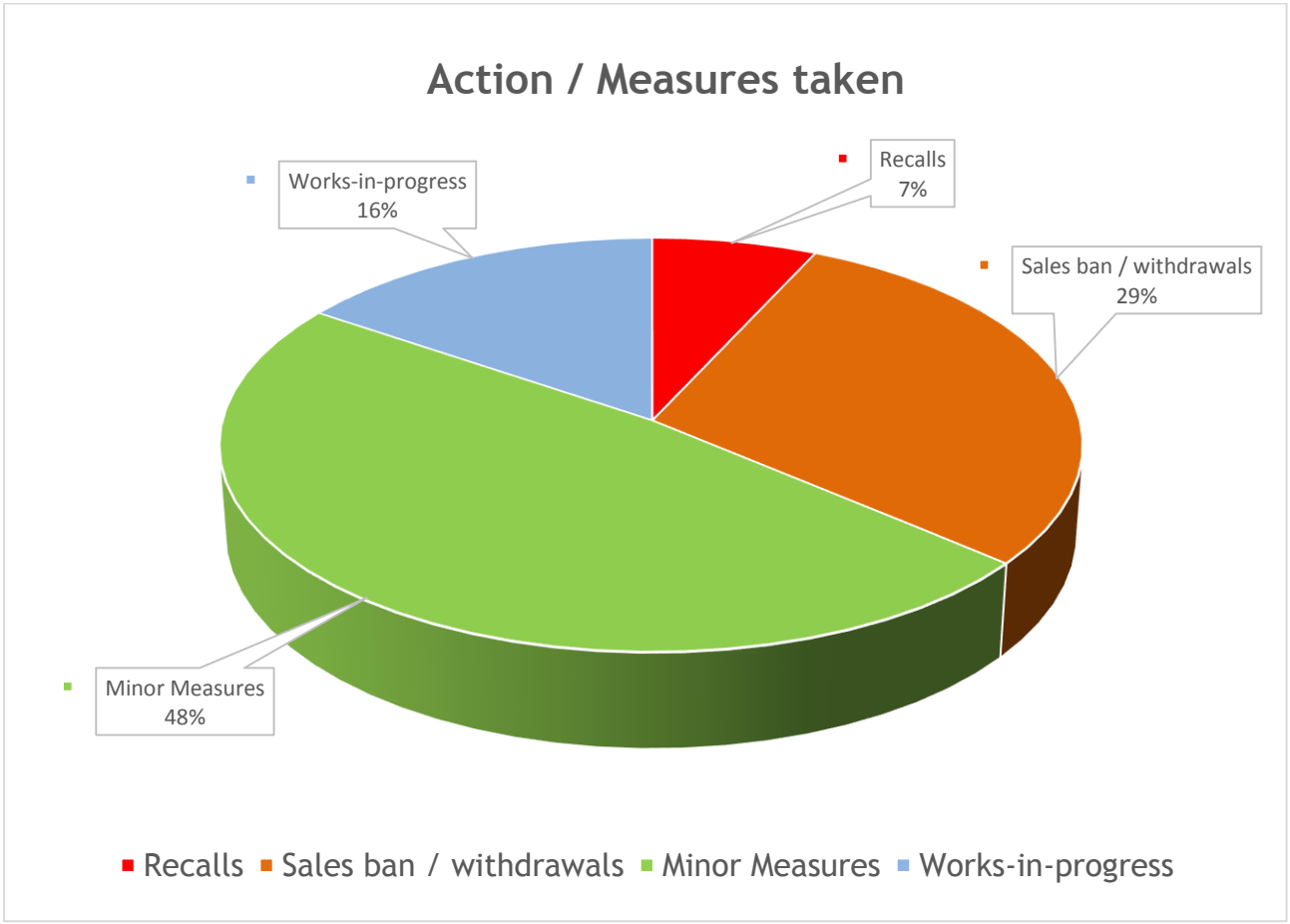

Figure 57, Action & Measures taken

Before delving into the measures taken in more detail, it is worth giving a generic explanation of the kinds of measures usually taken by market surveillance authorities, the one at the top being the most serious action by market surveillance authorities and/or economic operators:

Recall - In line with the definition found in Directive 2001/95/EC, this shall mean any measure aimed at achieving the return of a product that has already been supplied or made available to consumers by the producer or distributor.

Sales bans & Withdrawals - These are the next level of action that market surveillance authorities usually take.

> **Sales ban** - Product is prohibited from sale permanently or during a certain time-frame / period.
>
> **Withdrawal** – In line with the definition found in Directive 2001/95/EC, this means any measures aimed at preventing the distribution, display and offer of a product which is dangerous to consumers.

Minor measures - Manufacturer takes measures to eliminate risks posed by products in line with directions provided by the respective market surveillance authority. There could be corrective or preventative type of actions, including some other type of minor actions which also fall under this category. For example minor design changes, minor changes in production or quality control, minor update of marking etc.

Works-in-progress - The market surveillance authority is still working on the type of action needed, possibly in coordination with the economic operator. It could be, for example, that the authority is waiting for further technical reports from the manufacturer before action is taken. This may take time, especially if one is dealing with information that needs to come from outside the EEA.

Going back to Figure 57, only 7% out of 58 samples needed the highest type of measure taken. This equates to 4 samples. When one relates this to Figure 44, one immediately notices that out of a total of 12 samples with 'serious risk', only 4 needed to be recalled back. This is around 33% of all those samples that were identified as having a 'serious risk'.

Additionally, 29% out of the 58 samples which had some form of measures taken relate to 'sales bans' and/or 'withdrawals' from the market. However, an additional 58% of the 58 samples only had minor measures taken with another 16% registered as 'works-in-progress'.

With regards to RAPEX alerts, it is worth noting that whenever a market surveillance authority classifies a product as having a serious risk, it is obliged under Article 12 of the GPSD Directive to report it to the European Commission via the RAPEX system. Refer to: http://ec.europa.eu/consumers/safety/rapex/

Such alerts are initialled checked and confirmed by the European Commission and in turn are distributed immediately to the rest of the Member State contact points and also shown on the website as a RAPEX alert for consumers to be aware of these dangerous products.

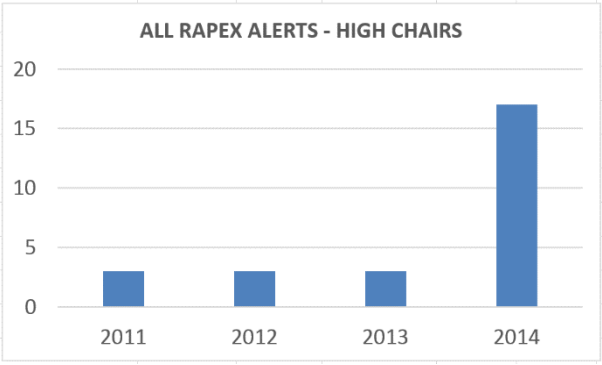

Figure 58, RAPEX Alerts on High Chairs

Figure 58 shows the number of RAPEX Alerts related solely to high chairs that have been issued by market surveillance authorities over these last four years. It is evident that this project has had a significant effect on the number of alerts being alerted to the European Commission. This shows that the activities of this project and action taken have been relatively effective and a number of dangerous high chairs have been removed as a consequence of this coordinated joint action.

8. OBSERVATIONS AND RECOMMENDATIONS

8.1 Technical Observations and Recommendations in relation to the European Standard EN 14988:2006+A1:2012

These technical observations and recommendation have been initially prepared by SGS and then discussed with this working group on high chairs (JA2012). The observations and recommendations below are in complete agreement with this working group and form an integral part of this final report.

Clause 5.2 – Holes gaps and openings

Assessment of finger entrapment in openings applying the wording of the standard raised certain non-conformities that would not appear on other standards for a similar opening and same age range of children using the child care article.

This can be explained as studies and hazard analysis have been carried out since the EN14988 was published in 2006, which give a different view of openings likely to generate a finger entrapment hazard. The latest draft revision of CEN/TR13387 – Child use and care articles – Safety guidelines which is at its final stage of elaboration concerning Mechanical requirement provides following information:

Draft prEN13387 [extracts]

RATIONALE

[…]

This hazard occurs when a child's finger becomes stuck in openings and gaps and the flow of blood to the finger is reduced. Additionally the weight or movement of the child may cause dislocation or displacement of a finger joint.

These hazards increase as the child's desire to explore its environment increases. Even when a child is mobile, it may not always have the ability to extract its finger or fingers from the openings and gaps. Reducing the depth of penetration in the free openings and gaps may avoid potential hazards.
The shape is also to be considered for assessment of a risk: a round or equilateral shape may cause reduction of blood circulation. Additionally openings and gaps should be taken into consideration whether the child is in sitting or standing position.
The age and ability of the child should be considered.
[…]

REQUIREMENTS

There should be no completely bounded circular openings (see examples in Figures 14 and 15) in rigid materials between 5 mm or 7 mm and 12 mm. Minimum and maximum dimensions shall be chosen with the help of anthropometric data, capability of the child and all other relevant sources of information, unless the depth of penetration is less than 10 mm when tested in accordance with 5.6.4. It should be noted that other dimensions may need consideration.

For products designed for children who can stand up inside a product, there should be no V-shaped opening in rigid materials at a distance of more than 150 mm from the standing surface, that narrow to the bottom to a dimension less than 12 mm, unless the depth of penetration is less than 10 mm when tested in accordance with 5.6.4.

If a V-shaped opening has walls on each side for the full depth of the opening then the requirement is satisfied. See Figure 5.

The finger probe used for mesh shall not penetrate when inserted perpendicularly to the mesh when tested in accordance with 5.6.4.

Figure 59 shows examples of the shape of openings which present a finger entrapment. On the other hand, Figure 60 show examples of openings which may not present a risk of hazardous finger entrapment.

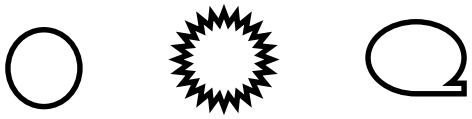

Figure 59 — Examples of the shape of openings which present a finger entrapment

Dimensions in millimetres

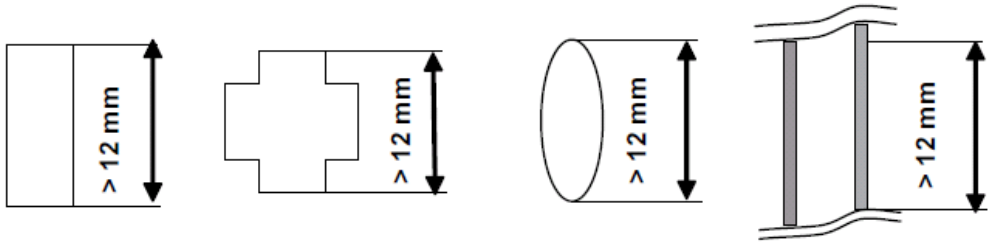

Figure 60 — Examples of openings which may not present a risk of hazardous finger entrapment

France anticipated this philosophy in 2005 by publishing a Guide GAS54-050 allowing conducting a risk assessment when applying Child Care articles standard and some conclusions given in the reports delivered in the frame of this study may have been changed using the guide.

As a conclusion of this, high chairs may have failed the requirement on finger entrapment in accordance with the standard without posing any real entrapment hazard.

Clause 5.3 – Moving parts

The tray of high chairs may not be considered as moving parts are it is locked in position. Due to the materials used and gaps however, pinching hazards /squeeze points may appear between the tray and the armrest, under the action of parents resting on the other side of the tray or by the action of other children pulling downwards. Test method in EN14988-2 § 6.6.1 been used to assess if the gap between the tray and the armrest (opening and closing distance) is always less than 5 mm.

The test method in the standard would need to be further clarified on this particular point.

Clause 6 – Stability

The stability of the product should be assessed taking into account the condition given in clause 5.1 as follows:
"The requirements apply to a high chair assembled and erected in accordance with the manufacturer's instructions"

This condition is repeated in the clause 4.1 of EN14988-2 as "Preliminary preparation" – this concerns the assembly and unfolding of the high chair.

Regarding the positioning of the high chair for testing in accordance with 6.17 this condition of 4.1 applies:
"If the instructions allow for different adjustments or configurations of components (e.g. inclination of the backrest, height of the seat, position of the tray, position of castors/wheels, etc.), the most onerous combination shall be used for each test".

Therefore any adjustable backrests have to be placed in the most reclined position for rearwards stability, and any removable tray or backrest is removed.

Tray and footrest are mounted on the highchair and the backrest in the most upright position for forwards stability. The most onerous position is determined by testing, for sideways stability tests.

Regarding rearwards stability the inclination of the backrest as well the flexibility of the material it is made of, will be determinant for the result of the test.

8.2 Market Surveillance Authorities & Customs

Customs checklists should be easy to understand and simple to use. As a preliminary investigation by customs officers or even market surveillance officers during inspections at outlets, it may be worth taking a quick look at product labelling / instructions in order to see what standard the respective manufacturer is declaring compliance to. Those high chairs whose manufacturers did not even declare any compliance to a correct standard, were found to have a much higher chance of having some form of non-compliance. Additionally, out of these type of samples, almost **60%** were found to have a 'serious risk'. This therefore could possibly be a good preliminary indicator that something might not be right with the respective product.

The importance of stability and good effective restraint systems within all types of high chairs is also of particular importance and therefore particular focus should be given by ms authorities regarding these aspects.

With regard to developing checklists for customs, it is important to identify clear and simple and indicators for when to "raise a flag" and inform the market surveillance authorities that further investigations are required on the product.

Although no specific checklists for Customs have been developed by this working group, a rather simple inspection list was developed for inspectors that were involved in this project. Such an inspection list can easily be adopted by Customs for any particular future project on high chairs.

Similar to previous joint actions, tendering for the testing of products at European level was found to be very useful. It not only ensured that all tests were carried out by one laboratory but the economies of scale also ensured that the prices quoted by the laboratories were much more competitive due to the high number of samples to be tested. This usually resulted in the laboratory being able to perform additional tests for the same amount of budget, thereby ensuring efficiency amongst market surveillance authorities across Europe.

8.3 Consumers

Similar to previous joint actions coordinated by PROSAFE, ANEC has been involved in this project from the start providing knowledge and a view from the consumer's perspective. Effective collaboration and cooperation existed throughout the project.

Ultimately, economic operators always have the full responsibility to supply safe products. However, it will also be useful to ensure that consumers are aware, read, understand and follow warning labels and manuals in order to use their high chairs in a safe and correct way. It is therefore suggested that market surveillance authorities work jointly with economic operators and consumer organisations at a national level in order to ensure that any particular risks or lack of knowledge on certain risks within high chairs continue to be well explained to consumers.

8.4 Economic Operators

With regards to economic operators, it is important that firstly they always try to cooperate with market surveillance authorities in order to reduce any risks present in the market. Consequently, it is strongly suggested that European organisations representing economic operators are encouraged to participate in joint market surveillance activities such as those coordinated by PROSAFE. Indeed, the level of voluntary action taken by economic operators imply that there is already a good working relationship.

Similar to previous joint actions on childcare articles, ENPC has also been quite active in this project and participated directly in a number of the CCA working group meetings. It is recommended that more European organisations representing businesses, manufacturers, importers and traders in such projects. Indeed, there has also been a positive indication within this project since other European organisations, such as EuroCommerce, are starting to express their interest in participating in these projects. Ultimately, healthy dialogue between all of the various stakeholders could help to identify further possible safety issues in this area which in turn could lead to an even safer European Single Market.

9. REFERENCES

1. EN 14988-1:2006+A1:2012 “European Standard on Safety requirements of High Chairs”
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3. EN 12790:2009 (European Standard on Safety Requirement for Reclined Cradles).
4. CEN/TR 13387:2004 “Child use and care articles- Safety guidelines”.
5. The General Product Safety Directive 2001/95/EC
6. The RAPEX Guidelines – Commission Decision 2010/15/EU
7. The EC Website on Risk Assessment Guidelines: http://europa.eu/sanco/rag
8. Best Practices Techniques in Market Surveillance, PROSAFE
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