The Flammability of Children’s Costumes

Representing the Local Authorities of Durham, Darlington, Gateshead, Hartlepool, Middlesbrough, Newcastle upon Tyne, North Tyneside, Northumberland, Redcar & Cleveland, South Tyneside, Stockton on Tees and Sunderland.

## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background and Aims</td>
<td>3</td>
</tr>
<tr>
<td>Objectives</td>
<td>5</td>
</tr>
<tr>
<td>Methodology</td>
<td>6</td>
</tr>
<tr>
<td>Conclusions</td>
<td>8</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>9</td>
</tr>
<tr>
<td>Cost</td>
<td>10</td>
</tr>
<tr>
<td>Retailer</td>
<td>11</td>
</tr>
<tr>
<td>Recommendations</td>
<td>12</td>
</tr>
</tbody>
</table>
Background and Aims

The safety of children’s costumes, in particular Halloween costumes, came to the attention of the public and gained prominence in October 2014 when television presenter Claudia Winkleman’s 8 year old daughter was severely burned after her witch costume caught fire, having been in contact allegedly with or close proximity to a lit candle inside of a pumpkin.

A witness at the time told the Evening Standard newspaper "Her cape caught fire, I think she was dressed as a witch. I think it was a candle that set her cape on fire. I saw her when the ambulance came, they had to wrap her up to put out the fire. She burnt her leg. They put her in a cast thing and put lots of plasters on her leg. She’s going to be in hospital for a week. It was really scary."¹

In May 2015 Claudia Winkleman gave her first interview concerning the accident to BBC One’s Watchdog programme, in which she said "Like if your shirt caught fire or anything I could put it out… It was the tights that… they came back to life… It was like those horrific birthday candles that you blow out and then they come back."²

On 24th September 2015 the Secretary of State at the Department for Business, Innovation and Skills, Sajid Javid MP, requested a nationwide investigation into the safety of children’s fancy dress costumes.³

The safety of children’s costumes currently falls under the need to comply with the Toys (Safety) Regulations 2011 (TSR 2011), bringing into effect European Toy Safety Directive 2009/48/EC. Compliance with the TSR is achieved through meeting the requirements of Part 2 of EN71.

The current standard does not necessitate that costumes are non-flammable, but that the rate at which they do flash is within an acceptable range, and where applicable relevant warnings are present, to minimise the risk. The standard provides the scope of toys which would be required to meet the flammability requirements.

‘Toys to be worn on the head’ are described under in 4.2.1 as beards, moustaches, wigs etc made from hair, pile or materials with similar features, moulded and fabric masks, hoods, head-dresses etc, and flowing elements of toys to be worn on the head.

‘Toy disguise costumes and toys intended to be worn by a child in play’ under 4.3 is defined as ‘cowboy suits, nurses’ outfits, and long flowing capes not attached to headwear…’.


² http://www.bbc.co.uk/news/entertainment-arts-32723504


In 2013, a Prosafe report was published into the risks associated with ‘toy disguise costumes’. In total 237 products were sampled, with 64 products failing to comply, predominantly due a lack of suitable warnings owing to the flammability of the fabric. The project was led by Latvia with participation from Greece, Portugal, Slovenia and the Netherlands.\(^4\)

In respect of the negative publicity generated by the 2014 incident, a number of national retailers subsequently promised that their costumes would also be required to meet the Children’s Nightwear standard, rather than just EN71:2.

The aim of the project was to sample the current market for children’s costumes in order to establish the level of compliance with EN71-2 in the United Kingdom.

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Objectives

Although the specified incident referred to above related to a Halloween costume, the standard applies to all toy disguise costumes available at all times throughout the year, so participant authorities will not be restricted to Halloween costumes, but the sampling was projected to take place between September and November 2015. Therefore within the delivery of the project, there was an expectation that a significant number of Halloween costumes would be purchased and submitted for sampling.

Based on the number of authorities who expressed an interest in the sampling, and factoring an average cost of a child costume, along with the cost of analysis, it was agreed that some 350 costumes would be purchased and sent for analysis.

All costumes submitted for analysis would be subjected to the tests for compliance with EN71-2 alone. It is not the objective of this report to test to a higher benchmark; or different benchmark such as the Children’s Nightwear standard, or to have the garment examined for its chemical properties. In that any costumes which have been deemed to pass by the analyst would do so in respect of EN71-2 alone, and that is not to say the costumes are then compliant with EN71, or ‘safe’.
**Methodology**

There was interest in the costume safety project expressed by a wide range of regions, groups and authorities, with 65 enforcement authorities across England, Scotland, Wales and Northern Ireland taking part within the project:

<table>
<thead>
<tr>
<th>Authority</th>
<th>Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scotland</td>
<td>50</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>50</td>
</tr>
<tr>
<td>Wales Heads of Trading Standards</td>
<td>50</td>
</tr>
<tr>
<td>Telford &amp; Wrekin</td>
<td>10</td>
</tr>
<tr>
<td>North East Trading Standards Association</td>
<td>50</td>
</tr>
<tr>
<td>London Borough of Islington</td>
<td>10</td>
</tr>
<tr>
<td>London Borough of Havering</td>
<td>10</td>
</tr>
<tr>
<td>Yorkshire and the Humber Trading Standards Group</td>
<td>30</td>
</tr>
<tr>
<td>Dorset</td>
<td>10</td>
</tr>
<tr>
<td>Trading Standards East Midlands</td>
<td>30</td>
</tr>
<tr>
<td>East of England Trading Standards Association</td>
<td>30</td>
</tr>
<tr>
<td>Worcestershire</td>
<td>10</td>
</tr>
<tr>
<td>Sandwell</td>
<td>10</td>
</tr>
</tbody>
</table>

Samples were allocated on the basis of regions, groups and individual authorities, with NETSA allocated a larger number to factor in purchases from national retailers. In total, there was a projected sample total of 350, and by the end of the project 309 costumes had been submitted for analysis and reported on.

In accordance with the standard, participant authorities were asked to look at either clothes to be worn by a child as disguise, or masks and wigs to be worn by a child as disguise, as costume sets often contain constituent parts of both.

Participant authorities were specifically asked that they:

- Limit their test purchases to physical/online retailers within respective regions and areas.
- Avoid purchasing costumes from large national retailers as Argos, Asda, Toys R Us et al.
- Restrict the number of samples purchased to an agreed figure.
- Give consideration to an average purchase cost of £20

The limitation on purchases was agreed in order to minimise duplication, and that the NETSA group would make the majority of purchases from national and online retailers. The restriction on sample numbers and the costs were based on the project budget and were set in order to maximise participation across the United Kingdom.
In respect of the restriction placed on authorities in terms of the costs of outfits, it was requested that they worked on an average costume price of £20, so where cheaper outfits were purchased, similarly so could more expensive disguises be bought. The cheapest price of all the samples purchased was £0.99, and the most expensive at £25.00.

It was agreed that one company would conduct the analysis of the costume materials for compliance with EN71:2, and that all authorities would send their samples directly there.

A submission form requested that authorities detail descriptions of the costumes, materials, product numbers, batch numbers and retailer information. At a later stage, authorities were also asked to supply manufacturer or importer details and costs where this was not supplied on or with the submission form, and the nature of any enforcement action taken in respect of non-compliance.

Authorities did ask as to whether there was any collective procedure for dealing with non-compliance, and they were advised that any action taken should be in line with their own enforcement policy.

Participant authorities were asked to start to conduct their purchases, or at least start to identify businesses who may sell costumes, on the 2nd September 2015.
Conclusions

The Technical Manager for the Test House was asked to provide comment on the collated results. He commented in the following manner:

“Of the 309 samples received, 248 disguises passed the flammability tests of EN71-2 applied by the Test House; a pass rate of 80%.

However of those that did not pass the test, 14 costumes had a result that was too close to the prescribed limit so that the uncertainty of measurement meant the Test House was unable to draw firm conclusions from the analysis and these were recorded as neither pass nor fail.

A total of 47 costumes were recorded as failing to comply with EN71-2, either as a result of the absence of suitable warning, or owing to the rate of spread of fire. 10 of the failures were due to the absence of warning, and 37 were due to rate of spread. I would differentiate between these as technical and unacceptable failures respectively”.

Based on the comments provided by the Test House it would appear that compliance could be greatly improved through better checks on the manufacturing processes to ensure that net material is orientated correctly to ensure minimal rate of spread of flame.

Overall, we believe that the level of compliance was reasonably satisfactory, considering the sample size and breadth of the market that samples were taken from. Although we fully accept that any failure of this type of consumer product, related to the obvious dangers with the products, is not a situation we would wish to see repeated.
Manufacturer

In respect of the manufacturer of the costumes supplied for testing, where details of the manufacturer were supplied in 307 instances, 148 of these costumes came from just 5 businesses, and one of which accounted for 60 of that number.

No instructions were given in respect of discrimination or avoidance for manufacturers, so I believe that the results of this project have clearly demonstrated a particular market-leader, and group of dominant businesses within the market for children’s disguise outfits.

Of the 148 costumes from this group, 17 of the outfits were deemed to be unacceptable failures, which translates to a failure rate of 11%, which is in-keeping with the overall picture, however I would have expected to have seen a lower figure in light of their position within the market.

To illustrate the point, had the group of 5 businesses been able to supply compliant costumes, the overall failure rate for the entire project would have been halved.

From discussions with one participant authority, I know that one of the businesses is disputing the result of the analysis in respect of the failure, in that they have an analyst report that has passed the garment, because they say an aspect of the headwear is not subject to the requirements of the standard. I am not at present aware of any other reports in dispute.

I know of one business having a Primary Authority relationship, and I understand another is in discussion about establishing Primary Authority. Neither of these authorities participated in the project, but I have had communication with them and understand that due to the levels non-compliance found with their costumes, the businesses will be giving consideration to the results, test reports etc, in the new year.
Cost

As referred to previously, the lowest cost of any costume purchased was £0.99, and the most expensive was £25.00.

- The average cost for all costumes tested is £11.55
- The average cost for all costumes tested that passed is £11.55
- The average cost for all costumes tested that failed for rate of spread is £11.53

Prior to conducting this project, it may have seemed intuitive to suggest that cheaper costumes were more likely to result in failures, however if we looked at the average cost alone it appears that the cost of an outfit has no bearing on compliance.

The majority of non-compliant costumes are found below the £14.99 price point, but of the 252 samples submitted where the authority was able to provide a cost for the outfit, 198 of the costumes cost less than £14.99. The sub £14.99 costume failure rate as part of the overall number submitted is 13%, so only marginally higher than the overall failure rate.
Retailer

As stated in the methodology, the intention was to minimise duplication through requesting that authorities avoided national retailers, however where authorities were unable to identify local-only retailers, purchases were made from nationals. This resulted in 67 costumes purchased from national retailers out of 304 costumes sampled.

Of the 67 purchases, 6 of which failed owing to rate of spread. This provides an unacceptable failure rate of 9%.

237 samples were taken from non-national retailers, that is to say that the business were local, or had a local presence through individual or multiple stores within a particular region, and of this number 29 failed owing to rate of spread. This provides an unacceptable failure rate of 12%.

Based on the figures above there does appear to be a slight weighting in favour of national retailers in respect of compliant costumes, but I don’t believe the figures are significant enough to suggest with any certainty that it is more or less likely to result in a safer costume if a purchase was made from a national retailer.

I have not isolated the data with regards to the type of retailer i.e. toyshop, supermarket, discount store. I have also been unable to identify whether the retailers who have been labelled as local retailers have an online presence of any significance i.e. there may be a large online retailer with a significant market share, but only a single local store or warehouse.
**Recommendations**

As the results and data shows from the project, neither cost, retailer nor manufacturer appears to have any particular bearing on the compliance of a children’s costume with EN71-2. As such I do not believe it would be practical to say to consumers avoid cheap costumes, buy from trusted retailers, or to identify particular brands.

In the run up to Halloween 2015, I do believe that the best advice has been the avoidance of naked flames, replace candles with LED equivalents where practicable, and to make parents and children aware of just what they should do in the event of a costume, or any article of clothing for that matter, catching alight through the UK’s Fire and Rescue Service advice of ‘stop, drop and roll’.

With consideration to the failures, all of those that did not comply with EN71-2 as result of the rate spread were predominantly because of the net material in dresses and the like, or owing to an aspect of the headwear material.

The Manager of the Test House, in his consideration, explains that the orientation of the net fabric can affect rate of spread, and as such simply reviewing manufacturing processes may result in significantly greater levels of compliance.

I have referenced a single incident earlier where there was a dispute over the relevance of the headwear fabric and the applicability of the standard to this, and if some analysts do not consider it as not subject to flammability tests then that could account for the other share of non-compliant outfits. As such there should be bipartisan agreement as to whether this is included either way.

I am satisfied that the level of enforcement action taken by Trading Standards services across the England, Scotland, Wales and Northern Ireland has been proportionate to the issues uncovered with almost all authorities reporting that where non-compliance has been found, retailers have voluntarily withdrawn products from sale, and the information concerning the failures have been referred on to home authorities for manufacturers or those in Primary Authority relationships.

As stated beforehand, there is a very small number of businesses that account for a very large number of costumes supplied across the UK, and it is for these companies to reflect on why some of the outfits that they supply have not complied with EN71-2, and therefore to make certain changes to their manufacturing process, quality control, or design that can result in overall improvements in the overall safety of the marketplace for Halloween and children’s costumes.

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