



INFORMATION SHEET 7

AN OPERATORS GUIDE TO BS EN 14960

Since 2002 there has been numerous discussions surrounding the PIPA testing scheme. Some operators have accepted the scheme others remain hostile towards it.

There is a misconception that PIPA is a 'membership scheme', that it is run by 'a committee' and that it has produced a set of regulations for the industry. It most definitely is not a membership scheme and whilst it has an 'advisory group' that meet during the year, they are not elected but invited by the Made Up Textiles Association (MUTA) to present views from across the industry. PIPA evolved following the release of a draft European document prEN 14960.

In 2002 a European Committee SW65 was set up to look at the manufacture/operation/design/operation and testing of inflatable play equipment. The committee was represented by members from Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom. From the original committee a working group (WG9) from the UK, Belgium, Austria, Germany and Italy was set up to produce a draft standard. The appointed UK representatives are Ken Lawrence and John Simmons. The committee convener, Sharon Sheather, is also from the UK. The working group produced the first draft in January 2003. Following this draft a technical committee CEN/TC 136 was appointed to produce a draft standard.

In May 2004 the committee produced a draft consultation standard which was given the number prEN 14960. The draft standard states the scope as being

"This standard is applicable to inflatable play equipment for intended and foreseeable use by children of fourteen years and under, individually and collectively.

This standard specifies safety requirements for inflatable play equipment on or in which the intended or foreseeable primary activities are bouncing and sliding. It sets out appropriate measures to address the risks and minimize accidents to users for those involved in the design, manufacture and supply of inflatable play equipment. It specifies information to be supplied with the equipment. The requirements have been laid down bearing in mind the risk factor based on available data.

This standard specifies the requirements that will protect the child from hazards that he or she may be unable to foresee when using the equipment as intended, or in a manner that can be reasonably anticipated.

This standard is not applicable to inflatable water-borne play and leisure equipment, domestic inflatable toys, air-supported buildings, inflatables used solely for protection, inflatables used for rescue, nor other types where the primary activity is not bouncing or sliding"

The major part of this 47 page document refers to the technical manufacture of inflatable play equipment and is therefore of little interest to owners and operators of equipment. However, it is well worth taking the time to read the full document as testing requirements then make more sense. There are a number of recommendations that do apply specifically to owner/ operators. There follows these recommendations together with the relevant paragraph number from the document.

4.2.7 Siting

The inflatable shall be sited well away from possible hazards such as overhead powerlines or other obstacles with hazardous projections (e.g. fences and/or trees).

The site shall be cleared of debris and/or sharp objects on, or embedded in, the surface.

If, for crowd-control purposes, a perimeter fence is used, it shall be at least 1,8 m from walled sides and at least 3,5 m from open sides. A gateway shall be 1,0 m wide

A clear area, free of any obstacle which could cause injury, shall be maintained around the inflatable. The extent of this clear area shall be established by dividing the height of the highest platform by 2. The minimum clear area shall be 1,8 m.

An exception to this rule is when an inflatable with inflated walls is sited directly against a solid wall or walls, for example the walls of a building. In such a case, the solid wall(s) must be 2 m higher than the highest platform height. Use of this exception must not result in the creation of additional hazards.'

5 Test Methods and Reports

Before testing, the equipment shall be assembled according to the manufacturer's/supplier's instructions.

Testing shall be carried out using the most appropriate method – e.g. measurement, visual examination, practical tests.

Test reports shall be prepared in accordance with EN 45001 and shall include the following:

- a) the number and date of this European Standard.
- b) details of the equipment tested.
- c) details of the condition of the equipment including any defects observed.
- d) the test result.

Test reports shall be supplied to owners/controllers/operators upon request.

6 Information to be provided by the supplier/manufacturer

6.1 General product information

The supplier/manufacturer shall provide information in the appropriate language(s) of the country in which the equipment is to be installed and used. The information shall:

- a) be printed legibly and in a simple form.
- b) be conveyed using illustrations wherever possible.
- c) include, at least, details of installation, operation, inspection and maintenance.

6.2 Pre-information

The supplier/manufacturer shall provide information concerning the safety of the equipment prior to the acceptance of the order. This information shall include, at least, the following where relevant:

- a) the height clearance and space required to operate the equipment safely;
- b) surfacing requirement;
- c) overall packed dimensions and weight;
- d) intended age range or height range;
- e) certification of conformity with this standard.

6.3 Installation information

The supplier/manufacturer shall provide installation information which shall include, at least, the following:

- a) a list of equipment;
- b) the method of anchorage and number of anchor points;
- c) the maximum safe wind speed;
- d) siting, height and space requirement;
- e) the maximum allowable slope of the site;
- f) crowd control measures;
- g) the need to keep users off of the inflatable during inflation and deflation;
- h) the air performance requirement of the blower.

6.4 Operating information

The supplier/manufacture shall provide operating information which shall include, at least, the following requirements:

- a) for constant supervision;
- b) to admit users to the inflatable in a controlled and safe manner;
- c) to restrict the maximum height of the user to the design height;
- d) to restrict the maximum number of users at one time to the design number;
- e) to use at least the minimum number of operating personnel;
- f) for users to remove their footwear;
- g) for users to remove hard, sharp or dangerous objects from their person;
- h) for users to remove glasses when practicable;
- i) to prohibit the consumption of food, drink and gum;
- j) to keep the entrance free from obstruction;
- k) to prohibit the users from climbing or hanging on the containing walls;
- l) to prohibit somersaults and rough play;
- m) that the operator and/or attendants watch the activity on the inflatable constantly;
- n) that the operator and/or attendants use a whistle or other signal to attract the attention of the users;
- o) that the operator and/or the attendants separate larger, more boisterous users from smaller ones;
- p) that the inflatable shall be evacuated during re-fuelling of a blower powered by an internal combustion engine.

The supplier/manufacture shall also provide information on what to do in the event of an emergency or accident.

6.5 Inspection and maintenance information

The supplier/manufacture shall provide information on the inspection and maintenance of the equipment.

The information shall specify the type and frequency of inspections.

7 Inspection, maintenance and alteration

7.1 Inspection

Inflatable play equipment shall be inspected at suitable intervals to ensure that deterioration in the equipment is detected and remedied in good time.

7.1.1 Routine inspection

Routine inspection shall be carried out before use each time the equipment is to be made available for use, and shall include checking that:

- the site is suitable;
- all anchorages are secure and in place;
- ancillary equipment is in position (e.g. impact-absorbing mats);
- there are no significant holes or rips in the fabric or seams;
- the correct blower is being used;
- the internal air pressure is sufficient to give a firm and reliable footing;
- there are no exposed electrical parts and no wear on cables;
- plugs, sockets, switches etc. are not damaged;
- the connection tube and blower are firmly attached to each other;
- the blower is safely positioned and its mesh guards are intact.

The equipment shall not be used by the public until any defects identified in the routine inspection have been rectified.

7.1.2 Annual inspection

The annual inspection shall be carried out by an inspection body and shall include any part of the inflatable and its ancillaries which may affect the safe operation of the equipment. It shall include checks of:

- previous inspection reports and certificates where appropriate;
- identification of the inflatable and blower (e.g. serial numbers);
- the anchorage system for wear, rips or chafing;
- the type and number of ground anchors or ballast for conformity with the design specification;
- the inflatable structure for wears or rips in the fabric;
- the walls and towers (when fitted) for firmness and uprightness;
- the internal air pressure to be sufficient to give a reliable and firm footing;
- the internal ties for wear and tear, particularly at loose or exposed ends;
- the bed seams, wall-to-bed seams and wall-to-tower connections;

- the mesh guards at the inlet and outlet of the blower;
- the condition of the impellor and fan casing;
- the condition of electrical wiring and/or installations;
- the presence of the fuel cap (petrol-engined blowers);

Inspection of some of these items may need to be done inside the inflatable. The above list is not exhaustive.

7.2 Maintenance

The carrying out of repairs while the equipment is in use shall be avoided.

7.2.1 Routine maintenance

The routine maintenance of inflatable play equipment consists of preventative measures to maintain levels of safety and performance. Such measures include:

- cleaning the inflatable;
- removal of debris and contaminants;
- rust control on the blower;
- cleaning the blower air intake.

7.3 Alteration

Alteration to any part of the equipment that could affect its essential safety shall only be carried out after consultation with the supplier/manufacturer or a competent person.

8 Marking

Each inflatable shall be legibly and permanently marked with, at least, the following:

- type and size of blower required;
- maximum height of user;
- maximum number of users;
- unique identifying number(s);
- year of manufacture;
- name and address of the supplier/manufacturer;
- number and date of this European Standard;

These markings shall be clearly visible when the equipment is in use.

Each blower shall be legibly and permanently marked with, at least, the following:

- type and size;
- unique identifying number;
- year of manufacture;
- name and address of the supplier/manufacturer;
- number and date of this European Standard.

These markings shall be clearly visible when the equipment is in use.

9 Documentation

The controller shall keep available documentation and records relating to the safety of the equipment.

These shall include:

- the information provided by the supplier/manufacturer;
- the certificate of inspection and testing;
- records of inspection;
- records of maintenance;
- records of alteration;
- accident reports.'

The full version of prEN 14960 can be found [here](#) .

Most UK, some European and some Far East manufacturers are now using the BS EN 14960 as a basis for their new designs and manufacturing techniques. Others who have taken a 'wait and see' approach could find themselves way behind their competitors in what is already an increasingly competitive industry.

In order to comply with the testing aspects of the 'Standard' there would be a need for trained testers and this task was undertaken by the Register of Play Inspectors International (RPII). A full list of registered testers can be found [here](#).

The History

In 2003 the Health & Safety Executive were investigating alternatives for the testing of inflatable play equipment. Initial thoughts were that this testing would be carried out by the Amusement Device Inspection Procedures Scheme (ADIPS). Inflatable Play Equipment is considered as a 'Fairground Amusement' and tests on fairground equipment is normally carried out by an ADIPS inspector. Following lengthy discussions little progress was made and the HSE asked the inflatable play industry to come up with alternative proposals. It was at this point that the prEN 14960 document was tabled together with PIPA testing. Following further lengthy discussions HSE announced that any owner/operator of inflatable play equipment who has his equipment tested by either an ADIPS inspector or followed the PIPA scheme would be deemed to have followed 'best practice' and therefore be complying with the relevant sections of the Health and Safety at Work Act and the Provision of Work Equipment Regulations. HSE also produced a revised information sheet ETIS 7 to assist operators in complying with their requirements under the various items of legislation. This was subsequently withdrawn in 2007. The National Association of Inflatable Hirers (NAIH) have asked HSE if they can produce and distribute a similar document to assist operators in complying with current regulations. This is work in progress.

The Decision

Owner/operators need to decide whether or not they follow the BS EN 14960:2006 document immediately or adopt the 'wait and see' approach. This decision needs to be considered very carefully. Those deciding to wait until the 11th hour may find themselves with a distinct trading disadvantage against their competitors who are already complying. Those who take on the recommendations of BS EN 14960 now will also have an immediate advantage as bookers become more aware of the standard. At this moment in time owner/operators have the choice as to how they get their equipment tested but now that BS EN 14960 has been released, that choice may well be removed. One Insurer has already altered the Policy Wording stating that insured operators need to comply with BS EN 14960 and we believe others may follow.

For owner/operators to comply with the testing requirements of the document they will have to have their units tested by an RPII inspector. Most RPII inspectors offer customers the choice of either PIPA tags and certificates or their own certificates. **Operators need to understand that the test is exactly the same.**

Although many manufacturers have adopted BS EN 14960 as the basis for their manufacturing processes, not all will issue PIPA tags and certificates. However, all should be issuing the documentation as listed in paragraph 6 of the Standard. Owner/operators purchasing new equipment would be advised to ensure that it complies with the BS EN 14960.

Operators selling on equipment should also remember that you then become the 'supplier' so if you are saying that the unit complies to the Standard you need to ensure that you provide all the required paper work. If you have not had this at your time of purchase you will still need to comply.

It should be remembered that the document, as referred to within this Information Sheet, is the draft version in order that we do not break any Copyright regulations. In December 2006 the European Committee voted and accepted a final draft as a 'Standard'. The final 'Standard' has now been accepted and comes under the jurisdiction of the British Standards Institute (BSI). The number of the Standard is BS EN 14960:2006 and the document is now available for purchase [here](#).

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Sources:

**INPA/ Performance Textiles Association / prEN 14960 / HSE / RPII/BSI
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Please Note BS EN 14960: 2006 has been revised to BS EN 14960:2013. See Information Sheet 52 for revisions to BS EN 14960