



Small Events Guide – Safe use of inflatables



Health & Safety Team, Environmental Health, Public Protection Service,
Newport City Council

SMALL EVENTS GUIDE - SAFE USE OF INFLATABLES

Who are we and why are you receiving this information sheet?

The Health and Safety Team form part of the Environmental Health Section at Newport City Council. As representatives on the Safety Advisory Group we would like to offer guidance and advice to small events where the use of inflatable's, including bouncy castles, are taking place.

The aim is to look at the hazards that can be associated with inflatables and ways in which the risk can be minimised to prevent harm to people using the equipment and also spectators. By following these simple suggestions the likelihood of injury can be minimised.

This information sheet covers inflatables used for bouncing and other purposes but not those used solely for protection. It does not cover waterborne inflatables used in swimming pools or other types not used by the public for entertainment purposes.

If you have any questions regarding the use of inflatables at your event please contact us for further information. Our details can be found at the end of this information sheet.

Recognising hazards associated with the use of inflatables:

The following hazards have been known to occur:

- instability and blowing away in windy conditions;
- situations caused by loss of pressure as a result of failure of the fabric zips and seams;
- failure or loss of power to the blower;
- disconnection of the blower; or
- litter blocking the air intake and/or vents;
- falls from the structure;
- windows tearing or detaching;
- tripping (particularly over anchorages);
- injury to users caused by boisterous behaviour,
- overcrowding or not separating larger users from smaller ones;
- access to dangerous parts of machinery (e.g. inadequately protected, or unguarded, blower units);
- electrical hazards (e.g. shock or burns);
- inadequate means of escape in case of fire;
- lifting injuries caused by manual handling;
- injury to users caused by wearing inappropriate clothes and shoes;
- suffocation; and
- entrapment.

PIPA Scheme:

PIPA Inflatable Play Association is a play industry inspection scheme designed to provide a system whereby play equipment can conform to the testing and inspection requirements of the relevant Health and Safety Law.

All inflatable play equipment falls within the scope of the PIPA scheme should carry a PIPA tag and be listed in the PIPA database <http://www.pipa.org.uk/index.asp>

The PIPA scheme is supported by the whole industry and was developed in partnership with the Health and Safety Executive.

A PIPA tag means:

- Designed to recognised standard based on safety
- Tested by nationally qualified inspector Equipment approved for commercial use.

The PIPA scheme delivers:

- Improved safety for your children
- HSE recognised best practice
- Quality assurance
- Certified Initial test
- Certified annual testing

Tags

Following a design revision, there are now two types of tags:

Old: before Dec 2009, New: The new tag is flexible with two of the "jumping 'i's" in metallic foil.

Look for the



PIPA tag

Questions to ask an operator when hiring a bouncy castle or other inflatable play equipment:

- Are you conforming to the PIPA Scheme?
- Have you carried out the daily checks on the equipment as required by EIS7?
- When was the equipment last fully inspected?
- Will I get full instructions on its SAFE operation?
- What is the inflatable's PIPA tag?
- Can I see the current PIPA test certificate for this equipment?
- If I set it up with the blower unit at 1.2 metres distance will it still fit on my site?
- Is the equipment clearly marked as to its limitations of use? (max. user height etc.)
- Are you a member of a relevant association (AIMODS, TIPE or BIHA)? (Check this against the relevant web site listing (See Participating Organisations)
- Do you have Public Liability Insurance?

Do's & Don'ts:

Do:

- Ensure the appointed adult representative is in a supervisory capacity at ALL TIMES. The vast majority of accidents occur through lack of, or poor supervision.
- Have regard to the equipment's intended use. Only allow participants of similar age & size on a bouncy castle at any one time. Users that are outside the intended weight or height range can injure themselves and other users.
- Avoid any overcrowding and ensure that the manufactures recommendations for numbers are not exceeded.
- Position soft gym mats to cover any hard surfaces at the open front of a bouncy castle or in the area where other inflatables are used.
- Make sure that users of the inflatable remove any potentially dangerous objects, such as jewellery, buckles, shoes, etc. Glasses should be removed where possible.
- Ensure that the inflatable is anchored securely to the ground and ensure that you use every anchor point. Even in non-windy conditions the inflatable will move and creep (perhaps taking it dangerously close to the blower).
- Hire your inflatable from a reputable operator. Hire on the basis of the safest - not the cheapest. Look out for those registered with the PIPA scheme.
- Always check and make sure the equipment has a current test certificate.
- Follow the instructions given to you by the hirer - They are there for the safety of your children.
- Make sure the blower is at least 1.2 meters from the inflatable. Serious injury can occur if a user strikes the blower unit.
- Keep the entrance/exit areas clear of onlookers so that the operator or attendant has a clear view and can ensure that users enter/exit safely;
- Keep users off the device when it is being inflated or deflated. Deflate the device when not in use.



Don't:

- Allow users to climb on to the walls of a bouncy castle. Most accidents happen this way.
- Deflate the inflatable whilst in use. Users can strike the ground heavily if you do.
- Use the inflatable if you have any doubt as to its safety.
- Throw objects (or other people!) on to the inflatable.
- Allow users onto the inflatable in high winds or wet weather.
- Anchor the inflatable to a vehicle unless the vehicle has been immobilised and the vehicle is under the control of the operator to prevent movement.

- Allow users who do not meet the height restrictions to use the device;
- Allow users to consume food or drink or chew gum on the device;
- Allow users to obstruct the entrance or exit of any inflatable device.
- Allow anyone to play on the step or front apron of a bouncy castle;
- Allow the continued use of the equipment if a defect is found until the cause has been identified and remedied. This may include checking all similar components. If there is any doubt about continued safety, the device should not be used until a competent person has confirmed that it is safe to do so.



Inspection of equipment:

The Provision of Work Equipment Regulations 1998 (PUWER) require inflatable devices to be inspected at suitable intervals to ensure that safe conditions are maintained, and that any deterioration in the device is detected and remedial action taken in good time.

Annual inspection:

Each inflatable should be thoroughly inspected at least once in every 12 months. This procedure needs to be carried out by a competent person. The Annual inspection needs to include checks of the following:

- previous inspection reports and certificates where appropriate;
- provision of a blower unit as specified by the manufacturer, or one that at least provides sufficient pressure to allow the inflatable to be used safely, suitably guarded at the air inlet and outlet;
- condition of blower impeller and fan casing where practicable to inspect;
- condition of accessible blower electrical wiring;
- condition of all electrical installations;
- anchorage system for wear, rips or chafing;
- type and number etc of ground anchors or ballast for conformity with design specification;
- structure for wear or rips in the fabric;
- walls and towers (when fitted) are firm and upright;
- pressure is sufficient in the bouncing area and at the step/front apron to give a reliable and firm footing;
- internal ties for wear and tear, particularly at loose or exposed ends;
- bed seams, wall-to-bed seams and wall-to-tower connections;
- identification of the device; and

- if used on a fixed site, the location.

Inspection of some of these features may need to be done inside the device. The above list is not exhaustive and the manufacturer may specify additional items. The annual inspection needs to include any part of the inflatable and its ancillary equipment that may affect the safe operation of the device.

Daily checks:

Checks should be carried out before the first use on any day using advice provided by the manufacturer in the operations manual. These should include checking that:

- the site remains suitable, with crowd control measures in place if appropriate;
- anchorages are intact, protected where necessary, and ropes not worn or chafed;
- anchor system secures the inflatable device to the ground;
- there are no significant holes or rips in the fabric or seams;
- the correct blower specified for the device is being used and the air pressure is sufficient to give a reliable and firm footing;
- there are no exposed electrical contacts, there is no wear on electric cables, and plugs, sockets and switches are not damaged;
- if an internal combustion engine is used, that the fuel cap is placed firmly on the fuel tank and any reserve fuel tank is suitable and remains in a safe position;
- bolts and screws of the blower are properly secured and that robust guards are secured over the air inlet and outlet;
- the blower/inflation tube connection is in good condition and is firmly fixed to the blower; and
- the blower is positioned correctly, adequately protected or guarded and is not causing a tripping hazard.

Safe operation of the inflatable:

Securing the inflatable:

It is essential for the safe operation of a device that the manufacturer's instructions regarding the use of anchorage points should be followed. The device should be secured to the ground with ground stakes, where the ground is suitable. Some equally effective method can be used on hard standing, e.g. attaching the anchor ropes to fittings already in the ground, or to sandbags or other weights, if these are capable of taking the load. Inflatables can be tied to a vehicle or other movable machinery, providing the vehicle or machinery is immobilised and under the control of the operator.

Windy conditions & inclement weather:

Inflatables should not be used when the wind or gusts are in excess of the maximum safe wind speed specified by the manufacturer.

The industry recommends a maximum wind speed of Force 5 on the Beaufort scale of 30-38 kph (19-24 mph). Force 5 is a fresh breeze when small trees in

leaf begin to sway; whereas Force 6 is a strong breeze when large branches are in motion, whistling can be heard in telephone lines and umbrellas can only be handled with difficulty.

Weather forecasts can be obtained from the Meteorological Office.



Other hazards:

The controller or operator should ensure that the inflatable device is sited well away from possible hazards such as overhead power lines or other obstacles with hazardous projections (e.g. fences). If the ground surface is abrasive, oily or dirty, a ground sheet should be used to prevent wear and tear of the base material.

Supervision:

The controller should determine the minimum number of attendants needed to operate the device safely, and ensure that at least these numbers of attendants are on duty when the device is in operation. In deciding how many attendants are required, the controller needs to consider matters such as the number of people using the device, the age of the users and the type of environment in which the inflatable is being used. Attendants should be aged 16 or over and the operator should be 18 or over.

Crowd control:

If the risk assessment carried out by the controller shows that control measures are required to handle large crowds in the immediate vicinity of the inflatable, then crowd control barriers should be provided by the controller. They should be at least 1 m high and be capable of withstanding people leaning on them, or being pushed against them. Where the public does not have access to the sides or back of the inflatable or crowd pressures are not anticipated, then a lower standard is acceptable.

Training:

The controller should ensure that all operators receive effective training in the working of the device including:

- the method of operating the device;
- safe methods of assembly/dismantling, where applicable; and
- how to make a daily check;

The controller should ensure that all operators and attendants receive effective training in the operation of the device including:

- safe entry/exit for users;
- safe anchoring of the inflatable;
- crowd control measures, and barriers;
- measures to be taken in the event of power failure; and
- procedures for reporting accidents, defects or breakdowns.

Getting help:

If you have any questions please feel free to contact us, or alternatively you may find the following websites and documents helpful.

Sources of further information:

PIPA Inflatable Play Inspection - <http://www.pipa.org.uk/>

PIPA Essential Reading - Frequently Asked Questions - [http://www.pipa.org.uk/downloads/PIPALeaflet\(2\).pdf](http://www.pipa.org.uk/downloads/PIPALeaflet(2).pdf)

HSE Information Sheet – Safe use and operation of play inflatables, including bouncy castles - <http://www.krmgroup.com/PDF/HSE-INFLATABLE-GUIDE.PDF>

HSE website – www.hse.gov.uk

How to contact us:

Health & Safety Team, Environmental Health, Public Protection Service, Newport City Council, Telford Depot, Telford Street, Newport, South Wales, NP19 0ES

Email: env.health@newport.gov.uk

Phone: 01633 656656

Website: www.newport.gov.uk/healthandsafety