

Safety Information – Walker Walkers/Aqua Balls

Introduction.

The items to which this applies are known variously as ‘water walkers’, ‘aqua balls’, aqua zorbs etc. They are essentially an inflated transparent sphere between 1 and 2m in diameter, often made from thermoplastic polyurethane (TPU) which is fitted with a diving suit waterproof zip. The vast majority are imported from China and the quality of both the sphere and the zip are extremely variable

This Alert deals with single skinned balls which completely contain the rider and are designed primarily for use on water or other soft surfaces. It does not apply to double skinned land balls. They are sometimes advertised as fitness aids but more often as an amusement device.



Use. Riders climb into a deflated ball and the zip is closed apart from a gap large enough to push in an air feed. It should be noted that once zipped inside the sphere the rider cannot open the sphere and get out. An operator then blows air into the ball until it is self supporting with the rider in it and the zip is then fully closed. The inflated ball containing the rider is then pushed out onto the water or the beach etc.

The majority of the balls seen so far have been on swimming pools or small water enclosures at funfairs and theme parks. It is understood that they are now appearing in small transportable pools in town centres and at shows and fetes etc.

Problems.

There have been a number of problems notified to HSE concerning these items, some from UK and some from other countries. At the time of writing there have been no serious UK accidents reported to HSE involving water walkers but there have been a number in Europe and in the USA. Common factors which both regulators and operators should be aware of include:

- High speed inflation. Some operators use petrol driven leaf blowers or similar to fill the sphere with air. This produces high frequency noise that can damage the hearing of the rider and exhaust fume can get into the sphere. There have also been occasions where detritus such as small stones etc have been fired at the rider. Filling should be done with as wide a diameter pipe as possible to get high volumes of air into the sphere but with less force. This should ideally be done from an electric blower fan suitably protected for use near water.
- Multiple occupancy. The spheres should only contain one person. When the ball is moving on water or land the rider has minimal if any control and two or more riders can cause one another serious injury. Multiple riders will also have a serious effect on the amount of oxygen available in the sphere (see below).
- Oxygen level. The spheres are both air and water tight. Studies conducted in the USA have shown that there is sufficient oxygen within an inflated 2m sphere to allow one physically active person to breathe properly for between 8 and 10 minutes. After this the oxygen levels begin to deteriorate with the obvious consequences if not corrected. Oxygen levels will also decrease faster if there is more than one rider, if the rider is out of control or panicking and if they are using a smaller sphere. The spheres should be kept in an area where the riders can be observed by the operator and from which prompt rescue can be made if necessary.
- Water depth. If the water is too shallow riders can hit the ground through the pool base when they fall and if too deep, the balls can roll out of the pool. Manufacturer instructions should be followed and the depth checked regularly during use and topped up as necessary. The pool should be set up on level ground so that the water level cannot vary significantly. Operators should ensure they have facilities in place to ensure prompt rescue can be made if necessary.
- Rider size. Manufacturer instructions should be closely followed concerning maximum heights and weights of riders. A heavier person causes the sphere to sit deeper in the water and they are more likely to hit the ground when they fall.
- Tethering/restraining. The spheres are very wind sensitive and even at comparatively low wind speeds are very difficult for the rider to control on water. Once the wind has taken the sphere the rider will be unable to control its speed or direction and will fall around inside. A number of serious accidents have happened in the USA due to this.

Spheres should be tethered and/or the perimeter of the safe area should be covered with a soft restraint system such as nets or boxing ring type ropes to keep the sphere from rolling away if they get out of control. This restraining

system should assume the rider has no control of the sphere. They should never be used either on or where they can get uncontrolled access to open water.

When used on soft ground it must be ensured that the sphere cannot escape from the enclosure or be allowed to gather sufficient speed to cause injury to riders.

- Sudden deflation. Spheres have deflated suddenly due to poor repairs, failure of the seams and/or the zips. If not kept clean and regularly lubricated with silicon or similar, zips can fail to close properly and in certain circumstances can burst open. This is potentially life threatening if the sphere is in deep water and the rider cannot get out. Spheres and zips should be checked thoroughly at the start of the day and regularly thereafter.



Testing.

These items are articles of fairground equipment as defined in the Health and Safety at Work etc Act 1974 and as such will require an annual test by a competent person.

Enforcement.

Whilst HSE are normally the enforcing authority for fairground equipment it is probable that the majority of these types of attractions will be found operating as single items in parks, town centres or small shows etc. Unless they are operating on a fairground, when HSE will remain the enforcing authority, the appropriate Local Authority will be the enforcing authority for these attractions.

Further information.

Further information or questions should be directed at the Entertainments and Leisure Sector of HSE.