



# Hazard Alert

**WORKPLACE SERVICES** Department for Administrative and Information Services

## NO. 31 SAFE OPERATION OF INFLATABLE AMUSEMENT STRUCTURES

DATE: 14 March 2001

### 1. OBJECTIVE:

The purpose of this Alert is to inform Amusement Ride owners and operators about the need to erect and operate inflatable amusement structures in a safe manner.

### 2. BACKGROUND:

Workplace Services is currently investigating an accident involving an inflatable amusement structure (jumping castle) at a country race meeting north of Adelaide. The jumping castle was erected and operating on an apparently fine day when it is reported that a strong gust of wind lifted the jumping castle, releasing or breaking the restraining ropes. Twelve children were injured in the incident, one fatally.

Similar incidents have been reported in other parts of Australia and overseas, including Tasmania, where a jumping castle's restraining ropes slipped off the anchoring pegs, injuring a mother and two children.

### 3. PREVENTATIVE MEASURES:

Due to these incidents, the following recommendations are emphasised:

- A thorough check of the inflatable structure and its accessories shall be carried out before use. This includes checking that all anchor points, anchor ropes and anchor stakes or ballast are undamaged and fit for continual use,
- Each device shall be held down in accordance with the manufacturer's recommendations, with the following requirements, as taken from AS 3533, as a minimum standard:
  - On grass or unpaved areas, pegs shall be used at every anchorage point and shall be driven at least 300mm into the ground. Heavy pegs (at least 25-30mm in leg size) shall be used on at least half of these anchorage points. Consideration should be given to using anchoring pegs with a restraining hook or collar at the top to prevent the attached ropes sliding up and being released. The tripping hazard

introduced by this system of anchoring should also be addressed.

- Where inflatable structures are used on paved surfaces, they shall be anchored by tying to a secure, preferably permanent, structure. In the absence of such structures, an adequate ballast system shall be used, with the minimum requirement being eight concrete or similar blocks with a mass of at least 50 kg each.
- All tie-down ropes attached to the device shall be fastened to a peg or anchorage. Any ropes that become detached shall be replaced with ropes of at least equivalent breaking strength and attached with the same or better attachment strength.
- Each inflatable structure, while operating, shall be under the supervision of a person at least 18 years of age, who is fully trained in all aspects of its safe operation. As well as monitoring the holding down requirements and weather conditions, this person shall also ensure that an appropriate mix of persons use the device and that children are not in danger of injury from adults using the device at the same time
- The operator should monitor prevailing wind conditions and cease operation when the wind velocity approaches the maximum recommended by the manufacturer. The structure shall not be used in wind speeds greater than 45 km/h. The device should be cleared and deflated immediately when the wind speed approaches this figure.

For more detailed information about the operation of inflatable amusement structures, refer to Australian Standard 3533 – 1997 Amusement Rides and Devices.

### 4. FURTHER INFORMATION:

For further information in relation to the contents of this Alert, please contact:

Department for Administrative and Information Services  
**Workplace Services**  
Construction, Utilities and Telecommunications Team  
GPO Box 465, ADELAIDE SA 5001  
**Ph:** 1300 365 255  
Mobile and Interstate callers **Ph:** (08) 8303 0400  
Website: <http://www.eric.sa.gov.au>