

---

# **SAFETY BULLETIN**

## **FOR IMMEDIATE IMPLEMENTATION**

### **RE: COMMERCIAL USE OF PLASTIC PATIO CHAIRS**

Over the past few years, the advent and mass production of inexpensive, plastic stacking chairs has created a large market in the outdoor amusement, entertainment and food service industries. These chairs can be inexpensively purchased at almost any discount, hardware or home supply store nationwide; and can be stacked and stored in large quantities, occupying little space. They are very lightweight, making them convenient for one person to move or set up en masse.

With the growing popularity of these chairs at fairs and festivals, our office has noted a corresponding increase in serious injuries resulting from their use. These chairs are not for commercial use and may collapse under stress. The plastic legs are generally unsteady and tend to buckle when the occupant leans or twists. Parents holding children and the elderly are at particular risk; as is anyone who is heavy or leans on the chair for personal support while attempting to sit or stand. Once a plastic leg has been bent or buckled, it is permanently weakened, creating a greater risk of collapse. Use of these chairs on hard surfaces is especially dangerous, where the base of the skull is exposed to severe trauma upon impact. We have seen increasing instances of head wounds and serious brain injuries resulting from plastic chair collapse.

We strongly suggest the use of these chairs for public or commercial events be discontinued. Furthermore, sponsors or organizers of fairs or festivals should take precautions to ensure vendors and concessionaires do the same while on your premises or participating in your events. Along the same line, you should be obtaining defense and indemnity agreements, as well as additional insured endorsements, from all vendors and concessionaires who contract with your event.

Please contact us with any questions or concerns. We appreciate the continuing opportunity to serve your needs.

## Purchasing and Inspection of Plastic Chairs

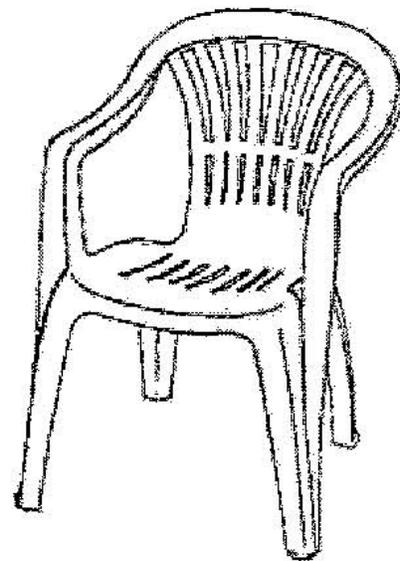
### Introduction

---

The advent and mass production of plastic “patio” chairs has resulted in their use in many venues beyond the residential setting. They have become a common fixture in the outdoor amusement, entertainment, and food service industries because they can be purchased at discount and home supply stores for less than ten dollars, and can be stacked and stored to occupy a minimum of space. They are also lightweight, making them easy for a single worker to set up.

With the growing popularity of these chairs at fairs and festivals, there has been a corresponding increase in injuries. Plastic chairs have lightweight structure and can collapse under stress, misuse, or as a result of common manufacturing defects. The plastic legs can buckle when the occupant leans or twists.

Parents holding children and the elderly are at particular risk, as is anyone who is heavy or leans on the chair for support while attempting to sit or stand. Once a plastic leg has buckled, it can be permanently weakened, presenting an even higher risk of collapse. Frequent use also contributes to accumulated stress, impairing the integrity of plastic chairs.



Well over a million plastic chairs with manufacturing or design defects have reached the end user. Although recalls have been issued, it is likely that many are still in use today. Two examples of recalls of plastic chairs by the Consumer Products Safety Commission are as follows:

- ? Gracious Living Industries recalled about 95,300 white, molded plastic patio chairs. When a person sits in one of these chairs placed on a polished or smooth surface, the chair's rear legs may spread beyond normal range, break, and cause the chair to collapse. The company is aware of at least 11 chair collapses involving injuries to backs, shoulder, heads, and elbows. As a result of these accidents, the company discontinued the sale of this chair.
- ? Southern Sales and Marketing Group recalled 900,000 plastic lawn chairs. The chair's rear legs lack rubber feet and may spread or break, causing the chair to collapse. The company is aware of 39 incidents involving these chairs resulting in injuries ranging from minor bruises to back injuries. The styles of chair with rubber feet on the rear legs were not recalled.

## Recommendation

---

Whenever possible, use of plastic chairs for public or commercial events should be curtailed. Sponsors and organizers of fairs or festivals should implement contractor measures to likewise preclude the use of plastic chairs by vendors and concessionaires. In addition, this is yet another reason to obtain indemnity agreements and additional insured endorsements from vendors and concessionaires associated with events.

If plastic chairs cannot be immediately removed from service, precautions regarding chair purchase and inspection should be implemented.

## Chair Purchasing

---

First, determine whether or not the plastic chairs in use comply with ASTM F1561, *Standard Performance Requirements for Plastic Chairs for Outdoor Use*. F1561 provides nationally recognized requirements for Class A (residential) and Class B (nonresidential) plastic chairs intended for outdoor use, and establishes methods for testing and performance criteria for plastic chairs for impact, static load, and rear leg testing. **Only Class B (nonresidential) chairs should be used for commercial events.**

Tests and criteria as outlined determine the overall usability and stability of chairs in an environment simulating the conditions of use. Tests simulate two types of surfaces:

- ? Smooth surfaces such as linoleum, wet pool decks; and
- ? Rough surfaces such as wooden decks, outdoor grassed areas.

Assure that the chairs are Class B (nonresidential). Also, contact the manufacture and request a copy of the test report, which should include the following information:

- ? Manufacturer's name and manufacturing lot number
- ? Number of chairs tested.
- ? Initial observations
- ? Dimensions
- ? Observations and noted structural damage, if any.
- ? The results obtained following the static load test, impact test, and rear leg test.

If the chair collapses at any point during the testing procedure, it is reported as a failure whether it recovers or not.

In addition, *only chairs with rubber feet on the rear legs should be purchased*. Using rubber feet helps mitigate the potential for sliding or bending of the legs, thus reducing the likelihood of a chair failure and subsequent injury.



## Chair Inspection

---

Each time chairs are set-up they should be visual inspected for signs of structural damage, such as breaks, fractures, bends, or cracks. Chairs with such conditions should be removed from service and discarded.

A formal, written procedure should be established and communicated to staff assigned to set-up and break down chairs. To demonstrate that reasonable and prudent measures are being taken with regard to chair safety, a record of such inspections should be maintained. The format could be as simple as follows:

Date	Inspector	# Chairs Removed from Service	Comment
------	-----------	-------------------------------	---------

## Conclusion

---

Care in the purchase and inspection of these plastic chairs can help reduce the potential for injuries due to their failure during use.

**ESIS® Risk Control Services: “Creating Success through Solutions”**

Website: <http://www.esis.com/rcs>  
 E-mail: [rcs@esis.com](mailto:rcs@esis.com)  
 Fax: 215.640.5084  
 Address: ESIS RCS, 1601 Chestnut Street, TL21P, Philadelphia PA 19103

PLEASE READ CAREFULLY The information contained in this publication is not intended as a substitute for advice from a safety expert or legal counsel you may retain for your own purposes. It is not intended to supplant any legal duty you may have to provide a safe premises, workplace, product or operation.

© Copyright 2002, ESIS, Inc. All rights reserved.