

APPLYING THE REGULATION RELATING TO PROTECTIVE SURFACING UNDER OUTDOOR PLAY EQUIPMENT

(55 Pa. Code §§3270.102(c), 3280.102(c) and 3290.102(c))

Effective September 22, 2008, the child care facility regulations at 55 Pa. Code §§3270.102(c), 3280.102(c) and 3290.102(c) state that outdoor equipment that requires embedded mounting must be mounted over a **loose-fill or unitary playground protective surface covering that meets the recommendations of the United States Consumer Product Safety Commission.**

Following is information about applying the recommendations of the United States Consumer Product Safety Commission (CPSC) regarding protective surface covering.

A. Scope of CPSC Recommendations

The CPSC recommendations for playground safety encompass a wide range of topics including protective surfacing. The regulations at §§3270.102(c), 3280.102(c) and 3290.102(c) require compliance with the CPSC recommendations regarding protective surfacing based on the “fall height” of the equipment. Fall height is the vertical distance between the highest designated play surface on a piece of equipment and the protective surfacing beneath it.

The CPSC recommendations differentiate between commercial child care facilities, i.e. those child care facilities not operated in residences, and residential child care facilities. Based on these distinctions, the Department will apply the CPSC recommendations based on the facility types identified by the CPSC as follows:

- Public Playground Safety Handbook, Publication 325 - This publication is intended for use by commercial (non-residential) child care facilities (see 1.3 *What is a Public Playground?*, page 3) and is available at <http://www.cpsc.gov/cpscpub/pubs/325.pdf> . A copy is attached to this document. The Department will apply the protective surfacing recommendations in this publication to a **child care center** and a **group child care home not located in a residence.**
- Outdoor Home Playground Safety Handbook, Publication 324 - This publication is intended for use by homes and residential child care facilities (see *Introduction – Outdoor Home Playground Safety*, page 1) and is available at <http://www.cpsc.gov/cpscpub/pubs/324.pdf> . A copy is attached to this document. The Department will apply the protective surfacing recommendations in this publication to a **family child care home** and a **group child care home located in a residence.**

Child care facility operators may choose to adopt CPSC playground recommendations that go beyond the scope of the regulatory requirement relating to protective surfacing; however, the Department will not measure compliance with those recommendations or offer guidance or technical assistance in meeting those recommendations.

B. Child Care Center and Group Child Care Home Not Located In Residences

In applying the regulation relating to protective surfacing, please refer to the following CPSC recommendations in the Public Playground Safety Handbook, Publication 325. Page numbers from the publication are included for your reference.

1. Fall Height:

- “Fall height” is the vertical distance between the highest designated play surface on a piece of equipment and the protective surfacing beneath it (see the definition of *fall height*, page 4).
- If you question how to determine the fall height of a specific type of playground equipment, further descriptions of types of playground equipment and how to measure fall height can be found at 5. *Parts of the Playground*, beginning on page 19. Please keep in mind that information applicable to the regulation pertains only to determining the fall height in order to assess whether the protection provided by the surfacing is adequate for the fall height. The publication gives specific directions to determine the fall height of various pieces of equipment. A chart is attached to this document to provide a quick reference regarding determining the fall height of types of playground equipment.

2. Protective Surfacing:

- Unitary Playground Protective Surface Covering – See 2.4.2.1 *Unitary surfacing materials*, page 9. Follow the instructions below when measuring compliance with the regulation for protective surfacing at a facility that has a unitary playground protective surface.
 - Request that the operator provide test data from the manufacturer that warrants the material as safe and shock absorbing for a fall from the highest accessible point on the outdoor play equipment according to test data obtained consistent with ASTM F1292. The test data from the manufacturer should identify the ***critical height*** rating of the desired surface i.e., the fall height below which a life-threatening head injury would not be expected to occur (page 3).
 - Check to see that the fall height of the equipment over the unitary protective surfacing does not exceed the critical height rating of the surface.

(Please note: The instruction regarding unitary playground protective surface covering is consistent with the requirements in our previous statement of policy regarding ground surface requirements.)

- Loose-fill Surfacing Materials - See *Table 2. Minimum compressed loose-fill surfacing depths*, page 10. Follow the instructions below when measuring compliance with the regulation for protective surfacing at a facility that has a loose-fill protective surface:

- Refer to Table 2 which gives the minimum required depth of compressed loose-fill material based on material type and fall height. Please note that this is the depth of the material when it is compressed due to use and weather, in other words, after the surface has been used and exposed to the weather¹.
- You may direct a facility operator to the text of the 2.4.2.2. *Loose-fill surfacing materials*, starting on page 9, for suggestions regarding installation of loose-fill protective surfacing to ensure adequate maintenance of the required depth of compressed material.

C. Family Child Care Home and Group Child Care Home Located in a Residence

In applying the regulation relating to protective surfacing, please refer to the following CPSC recommendations in the Outdoor Home Playground Safety Handbook, Publication 324. Page numbers from the publication are included for your reference.

1. **Fall height** – “Fall height” is the vertical distance between a designated play surface for the equipment (elevated surface for standing, sitting, or climbing) and the protective surfacing below the equipment (page 6).

2. Protective Surfacing:

- Loose-Fill Materials – See *Loose-Fill Materials*, page 5. Follow the instructions below when measuring compliance with the regulation for protective surfacing at a facility that has a loose-fill protective surface:
 - Refer to CPSC recommendations for loose-fill materials on page 5, as shown below, which give the minimum required depth of compressed loose-fill material based on material type and fall height. Please note that this is the depth of the material when it is compressed due to use and weather, in other words, after the surface has been used and exposed to the weather.
 - Minimum of 9 inches of compressed loose-fill materials such as wood mulch, wood chips, engineered wood fiber or shredded/recycled rubber mulch for equipment up to 8 feet high.
 - Minimum of 9 inches of compressed sand or pea gravel¹.
 - Minimum of 6 inches of compressed loose-fill for play equipment less than 4 feet high.
 - You may direct a facility operator to the text on page 5 for suggestions regarding installation of loose-fill protective surfacing to ensure adequate maintenance of the required depth of compressed material. The text states: “NOTE: An initial fill level of 12 inches will compress to about a 9-inch depth of surfacing over time. The surfacing will also compact, displace, and settle, and should be periodically refilled to maintain at least a 9-inch depth.”

¹ Although pea gravel is listed as a possible loose-fill surfacing in both CPSC publications, the child care facility regulations prohibit the use of pea gravel and other materials with a diameter of less than 1 inch in spaces where infants or toddlers receive care (see 55 Pa. Code §§3270.102(e), 3280.102(e) and 3290.102(e)). Please also see the grandfathering provision at §§3270.233(b), 3280.215(b) and 3290.212(b), relating to play surfaces.

- Unitary Playground Protective Surface Covering – See *Poured in-Place Surfaces or Pre-Manufactured Rubber Tiles*, page 6. Follow the instructions below when measuring compliance with the regulation for protective surfacing at a facility that has a unitary playground protective surface.
 - Request that the operator provide data from the manufacturer that shows the surfacing was tested per ASTM F1292 test standards. This report should show the specific height for which the surface is intended to protect against serious head injury. This height should be equal to or greater than the fall height and the protective surfacing below (page 6).
 - Check to see that the fall height of the equipment over the unitary protective surfacing does not exceed the height specified in the data from the manufacturer.

(Please note: The instruction regarding unitary playground protective surface covering is consistent with the requirements in our previous statement of policy regarding ground surface requirements.)

D. Grandfathering Provisions

The grandfathering provisions specifically relating to compliance with the CPSC recommendations for protective surfacing appear at 55 Pa. Code §§3270.233(a), 3280.215(a) and 3290.212(a) as follows:

A facility *lawfully operating or registered* as of September 22, 2008, has until September 22, 2010, to comply with the protective surface requirement described in §§3270.102(c), 3280.102(c) or 3290.102 (c), relating to condition of play equipment, as applicable.

1. **Facilities operating as of September 22, 2008** – A facility that was certified or registered prior to September 22, 2008 is required to comply with the protective surface requirements regarding six inches of loose-fill material or regarding unitary play surfacing that were in effect prior to September 22, 2008. The phrase “lawfully operating or registered as of September 22, 2008” means the facility was in compliance with the regulation in effect as of September 22, 2008 and is expected to maintain compliance with the regulation as follows:
 - Loose-fill materials - The regulations at 55 Pa. Code §§3270.102(c), 3280.102(c) and 3290.102(c) in effect prior to September 22, 2008 required that outdoor equipment that requires embedded mounting shall be mounted over at least 6 inches of loose-filled, impact-absorbing materials, anchored firmly and be in good repair.
 - Unitary playground protective surface covering - A facility that has a unitary protective surfacing that met the requirement of the statement of policy at §§3270.102a, 3280.102a and 3290.102a in effect prior to September 22, 2008 is already in compliance with the new regulation that is effective September 22, 2008.
 - Installation of new playground - If a facility that was operating as of September 22, 2008, installs a new playground on or after September 22, 2008, that new playground

must meet the regulation relating to protective surfacing at the time of installation and therefore must meet the CPSC protective surfacing recommendations.

2. **Facilities Newly Certified or Registered On or After September 22, 2008** - A facility newly certified or registered on or after the effective date of the new regulation is not covered by the grandfathering provision and must meet the requirements for protective surfacing as per 55 Pa. Code §§3270.102(c), 3280.102(c) or 3290.102(c), as applicable, effective September 22, 2008.

DETERMINING FALL HEIGHT OF PLAY EQUIPMENT

The CPSC defines “fall height” as the vertical distance between the highest designated play surface on a piece of equipment and the protective surfacing beneath it. The CPSC publication offers descriptions of various types of playground equipment and information regarding how to measure fall height. Below is a chart regarding the fall heights for play equipment described in the Public Playground Safety Handbook, Publication 325, see 5. *Parts of the Playground*, beginning on page 19.

EQUIPMENT	SECTION	PAGE	FALL HEIGHT
Platform	5.1.2.1	19	The fall height of a platform is the distance between the top of the platform and the protective surfacing beneath it.
Balance Beam	5.3.1.1	23	The fall height of a balance beam is the distance between the top of the walking surface and the protective surfacing beneath it.
Climbers	5.3.2.1.2	24	<ul style="list-style-type: none"> • The fall height for climbers is the distance between the highest part of the climbing component and the protective surfacing beneath it. • If the climber is part of a composite structure, the fall height is the distance between the highest part of the climber intended for foot support and the protective surfacing beneath it.
Upper Body Equipment	5.3.2.1.2	24	The fall height of upper body equipment is the distance between the highest part of the equipment and the protective surface below it.
Sliding Poles	5.3.2.6.1	28	<ul style="list-style-type: none"> • For sliding poles accessed from platforms, the fall height is the distance between the platform and the protective surfacing beneath it. • For sliding poles not accessed from platforms, the fall height is the distance between a point 60 inches below the highest point of the pole and the protective surfacing beneath it.
Track Ride Equipment	5.3.2.7.1	29	The fall height of track ride equipment is the distance between the maximum height of the equipment and the protective surface beneath it.
Log Roll	5.3.3.1.1	29	The fall height of a log roll is the distance between the highest portion of the rolling log and the protective surfacing beneath it.
Merry-Go-Round	5.3.4.2	30	The fall height for a merry-go-round is the distance between the perimeter of the platform where a child could sit or stand and the protective surfacing beneath it.
Seesaw	5.3.5.5	31	The fall height for a seesaw is the distance between the highest point any part of the seesaw can reach and the protective surfacing beneath it.
Slides	5.3.6.6	35	The fall height for slides is the distance between the platform at the top of slide and the protective surfacing beneath it.
Spring Rockers	5.3.7.1	36	The fall height of spring rockers is the distance between either (1) the highest designated playing surface or (2) the seat, whichever is higher, and the protective surfacing beneath it.
Swings	5.3.8.2	37	The fall height for swings is the vertical distance between the pivot point (where the swing connects to the equipment) and the protective surfacing beneath it.
Not Described Above	5.3.9	40	The fall height of a piece of playground equipment is the distance between the highest designated playing surface and the protective surface beneath it.