

ASTM Consumer Product Standards:

Enhancing Product Quality and Buyer Safety



Today, ASTM International standards are valuable tools utilized and referenced by industries and government organizations around the world. By making an important contribution to product research and development, manufacturing, and trade, ASTM standards ultimately influence the everyday lives of many of us. As consumers, one way we feel the positive impact of ASTM standards is in the numerous products we buy and use. ASTM consumer product standards improve product quality, reduce the risk of injury, and give us confidence that the products we rely on are safe and ready to use.

In the consumer field, ASTM standards address a wide range of areas including infant and child products like cribs, toys and playground equipment; household items like candles; cleaning-related products such as vacuum cleaners, brooms and mops; sports equipment such as safety helmets; leisure activities like amusement rides; and many other subjects. Standards are developed by several ASTM technical committees, each of which has made a valuable contribution to enhancing product safety and building consumer confidence.

ASTM COMMITTEE F15: SETTING THE STANDARDS IN CONSUMER PRODUCT SAFETY

ASTM International's largest consumer product standards committee is F15 on Consumer Products. Committee F15 has played an important role in consumer product safety standards for over 30 years. The committee's broad global membership of approximately 800 professionals is comprised of stakeholders from the manufacturing and retail environment, as well as government representatives and internationally respected trade and consumer groups. F15's significant scope of activities encompasses 46 standards-writing subcommittees, each of which focuses on a specific product area. F15 stakeholders work



Candle Safety Standards

proactively in the public interest, forming new subcommittees on an ongoing basis to address urgent safety issues and newly identified hazards in various products.

F15 AND CHILD SAFETY

One of the most critical areas of focus for Committee F15 is child safety. Throughout its history, Committee F15 has worked to address children's safety issues such as pool-related drownings, strangulation by clothing drawstrings, bunkbed injuries, crayon toxicity and more. Many of these standards are helping to prevent injuries and save lives throughout the world. An especially important set of standards address playground equipment for both public and home use, including issues such as head and neck entrapment, playground layout, accessibility, maintenance, and labeling. These standards include F 1487, Specification for Playground Equipment for Public Use, which covers children from two to 12 years old; and a new standard issued in 2005 - F 2373, Specification for Public Use Play Equipment for Children Six Months to 24 Months, which filled the need for a standard that deals with products intended for children two years old and younger. Residential play equipment industry is addressed by standard F 1148, Specification for Home Playground Equipment. Both F 1148 and F 1487

were recently revised to reflect latest industry developments.

Another important focus of F15 child-related products standards is toy safety. With thousands of new toys introduced to the marketplace each year, ASTM standards play a vital role to protecting the safety of children. An important contributor to that safety is F 963, Consumer Safety Specification for Toy Safety, which establishes recognized safety requirements for toys intended for use by



Playground Safety Standards



Scooter Safety Standards

children under the age of 14. First drafted in 1971, F 963 has been enhanced over the years to address new product technology and innovation.

KEEPING PEOPLE SAFE AT HOME

Numerous F15 standards also facilitate the safe use of products for children and adults in and around the home. To help lower the risk of children drowning at family swimming pools, F15 released F 2208, Specification for Pool Alarms. This important standard provides performance requirements for pool alarms for residential swimming pools and spas, and covers devices that provide for rapid and automatic detection and alarm in cases of unintentional, unsupervised or accidental entry of a child one year old or older, into the water of swimming pools or spas.

Inside the home, F15 furniture-related safety standards address a wide range of products including bed rails, bunk beds, mattresses, wall coverings, bathtub and shower structures, bean bag chairs, dressers, and many other product areas. Among the many notable standards are F 462, Safety Specification for Slip-Resistant Bathing Facilities, which establishes methods of testing the slip resistance of bathing facilities to minimize the accidents

caused by slipperiness to persons, especially children and the aged. Another critical safety area is furniture tipover, which is the focus of standard F 2057, Safety Specification for Chests, Door Chests, and Dressers. F 2057 is intended to reduce injuries and deaths of children from hazards associated with tipover of clothing storage units. Several revisions to the standards are currently under development to expand its scope to include other furniture components, including armoires, entertainment centers and shelving units; enhancements to warning labels; and the addition of a requirement to include restrainers to enable furniture to be attached to a wall.

RESPONDING TO NEW SAFETY CONCERNS

Recent years have brought the formation of several new F15 subcommittees in response to newly identified consumer safety issues. In 2005, F15.58 on Powered Scooters and Skateboards was formed to develop safety standards aimed at stemming the rise in child injuries and deaths from powered scooters. 2006 has also witnessed the start-up of several other new F15 subcommittees including: F15.59 on Children's Folding Chairs; F15.60 on Portable Pools; and F15.61 on Constant Air Inflatable Play Devices for Home Use.

F11 STANDARDS ENHANCE QUALITY OF VACUUM CLEANER SYSTEMS

While the standards of Committee F15 cover a wide variety of products used in and around the home, another ASTM committee is specifically focused on another popular consumer product. Committee F11 on Vacuum Cleaners, formed in 1972, develops standards that enhance the filtration efficiency, durability, and air performance characteristics of vacuum cleaners. Among the 27 standards published by Committee F11 is the widely referenced F 608, Test Method for Evaluation of Carpet Embedded Dirt Removal Effectiveness of Household/Commercial Vacuum Cleaners.

SAFER SPORTS, THANKS TO ASTM COMMITTEE F08

Whether aimed at serious professional athletes or the millions of people who enjoy various recreational activities, the standards of ASTM Committee F08 on Sports Equipment and Facilities help to make sports safer for all who participate. Formed in 1969, Committee F08 develops standards focused on sports equipment, surfaces and facilities. With approximately 600 members who participate on one or more of 25 technical subcommittees, Committee F08's overriding goal is to reduce the risk of injury and enable all of us to more safely engage in the sports-related activities we enjoy. The 125 standards developed by Committee F08 cover a wide scope of sports areas including headgear and helmets, bicycles, gymnastics and wrestling equipment, athletic footwear, eye safety, baseball and softball equipment, camping, fitness products, playing surfaces, and much more.

BETTER HEADGEAR AND HELMETS

Committee F08's most active subcommittee is F08.53 on Headgear and Helmets. This group is responsible for 19 standards, including headgear for martial arts, soccer, bicycling, football, baseball, pole vaulting, speed skating, and other sports. ASTM F 1446, Test Methods for Equipment and Procedures Used in Evaluating the Performance Characteristics of Protective Headgear, covers impact attenuation (the limiting of head acceleration), strength and stability of the retention system and its attachment to the protective headgear. The laboratory equipment, procedures, and basic requirements pertinent to testing protective headgear are contained in this important ASTM standard. A recent Committee F08 headgear standard is F 2439, Specification for Headgear Used in Soccer. In soccer, where minor head injuries among players are common, F 2439 is intended to reduce the risk of head injuries and concussions that may occur.

ENHANCING SPORTS EQUIPMENT PERFORMANCE

Several F08 standards also contribute to the performance quality and reliability of equipment used throughout numerous team and individual sports. Among the many notable standards are F 1931, Test Method for Characterization of Gymnastic Landing Mats and Floor Exercise Surfaces, which covers the measurement of shock absorption characteristics of common surfaces used in gymnastics. Landing pad performance is also very critical in the sport of pole vaulting. In this sport, F08 standard F 1162, Specification for Pole Vault Landing Systems, provides a valuable tool that addresses requirements for landing pad size, materials, and labeling, as well as testing procedures.

Earlier this year, baseball enthusiasts around the world enjoyed the excitement of the first annual World Baseball Classic. Committee F08 is active in this popular international sport too, with standards such as F 1881, Test Method for Measuring Baseball Bat Performance Factor, which provides a valuable guide for bat manufacturers.

F08 STANDARDS IMPROVE QUALITY OF ATHLETIC FIELDS

Another important topic of interest for the standards development activities of Committee F08 is athletic field improvement. Through the efforts of several of its subcommittees, F08 has – for over 15 years – contributed standards that have enhanced the quality of a variety of natural and artificial playing surfaces. Sports like baseball and football, which rely on heavily on natural grass surfaces, are aided by F08 standards such as F 2060, Guide for Maintaining Cool Season Turf-grasses on Athletic Fields. Sports stadiums and fields outfitted with artificial turf gain a valuable assist from the standards developed by Subcommittee F08.65 on Artificial Turf Surfaces and Systems. Notable standards include F 1015, Test Method for Relative Abrasiveness of Synthetic Turf Playing Surfaces.



Equestrian Helmet Standards

F08 athletic field and surface standards also extend to areas outside the world of sports. One such guide provides an example of close cooperation between multiple ASTM consumer-related safety standards. F 2223, Guide for ASTM Standards on Playground Surfacing, covers standards for selecting surface systems under and around playground equipment. F 2223 closely references several other related playground and toy safety standards, including F 1487 and F 963 mentioned earlier in this article.

COMMITTEE F27: KEEPING PEOPLE SAFE ON THE SKI SLOPES

Serving a sports-safety related role similar to that of F08 is Committee F27 on Snow Skiing. Standards developed by Committee F27 provide valuable tools and guidance for ski equipment manufacturers and retail and rental shop operators. F27 standards promote safety in the sport of snow skiing and reduce the potential risk of injury. Critical to skier safety on the slopes is durable, well-functioning equipment. F27 standard F 504, Test Method for Measuring the Quasi-Static Release Moments of Alpine Ski Bindings, facilitates proper performance of the ski-boot-binding system. Ski shop operators are better able to support skier safety with the help of standards such as F 1064, Practice for Sampling and Inspection of Com-

plete and Incomplete Alpine Ski/Binding/Boot Systems in Rental Applications.

SAFER AMUSEMENT RIDES THANKS TO COMMITTEE F24

Formed in 1978, ASTM Committee F24 on Amusement Rides and Devices is internationally recognized as the premier international authority on amusement ride standards. For over 25 years, F24 has provided a framework of standards and guides that supports and improves the strong safety record of the amusement ride industry.

F24's membership includes a strong global representation which enhances the acceptance of its standards by a broad range of international stakeholders, including the International Association of Amusement Parks and Attractions, the Outdoor Amusement Business Association, and the Amusement Industry Manufacturers and Suppliers International. F24's flagship standard is F 2291, Practice for Design of Amusement Rides and Devices. Often referred to as the "World Standard" for amusement ride design, F 2291 details specific criteria for the design of rides and devices, and was developed through the collaborative efforts of ride experts and interested parties from around the world.

Among the recent notable activities of Committee F24 is the release of standards F 2376, Practice for Classification, Design, Manufacture, Construction, and Operation of Water Slide Systems; and F 2374 Practice for Design, Manufacture, Operation, and Maintenance of Inflatable Amusement Devices. In addition, other standards are under development in new areas such as bungee units and bumper boats.

Whether it's the countless products that support and enhance our daily lives, or the wide range of leisure and recreational activities we enjoy, consumers everywhere can continue to count on the safety and support provided by ASTM standards. //

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