



Designation: F3458 – 21

Standard Specification for Marketing, Packaging, and Labeling Adult Magnet Sets Containing Small, Loose, Powerful Magnets (with a Flux Index $\geq 50 \text{ kG}^2 \text{ mm}^2$)¹

This standard is issued under the fixed designation F3458; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers marketing, packaging, labeling, and warning requirements for adult magnet sets containing small, powerful magnets. It is aimed at minimizing the identified hazards to children and teens associated with ingesting small, powerful magnets that are intended for adults, that is, those persons 14 years of age and older.

1.2 The values stated in SI units are to be regarded as standard. The values given in parentheses after SI units are provided for information only and are not considered standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

[D3359 Test Methods for Rating Adhesion by Tape Test](#)

[F963 Consumer Safety Specification for Toy Safety](#)

2.2 Federal Statutes and Standards:³

[16 CFR 1501 Method for Identifying Toys and Other Articles Intended for Use by Children under Three Years of](#)

[Age which Present Choking, Aspiration, or Ingestion Hazards because of Small Parts](#)

[16 CFR 1500.121 Labeling requirement; prominence, placement and conspicuousness](#)

[16 CFR Part 1700 Poison Prevention Packaging](#)

[21 U.S.C. Section 301 et. seq. Federal Food Drug and Cosmetics Act](#)

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *magnet set, n*—aggregation of separable magnetic objects that are marketed or commonly used as a manipulative or construction item for puzzle working, sculpture building, mental stimulation, education, or stress relief.

3.1.2 *permanent storage container, n*—receptacle designed to hold the magnet set when not in use.

3.1.3 *small, powerful magnet, n*—individual magnet of a magnet set that is a small object (as measured in Section 6 and Fig. 1) and has a flux index $\geq 50 \text{ kG}^2 \text{ mm}^2$ as determined in Section 6.

4. Instructional Literature

4.1 Instructions shall be provided with the product that are easy to read and understand, and are in the English language, at a minimum. These instructions shall include information on assembly, maintenance, cleaning, storage, and use.

4.2 The instructions shall include all of the warnings specified in 8.7.

4.3 The instructions shall describe the manufacturer's suggested strategy for counting and storing magnets.

4.4 The instructions shall describe typical hazard patterns, including young children finding loose magnets and teens putting magnets near their mouth or nose.

4.5 The instructions shall include an illustration of the hazard as shown in Fig. 2. It is acceptable to use another illustration if the comparable meaning is conveyed.

4.6 The instructions shall warn the consumer to seek immediate medical care or to call the poison control center if it is possible that magnets have been ingested.

¹ This specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.77 on Magnets.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from U.S. Government Printing Office, Superintendent of Documents, 732 N. Capitol St., NW, Washington, DC 20401-0001, <http://www.access.gpo.gov> or <http://www.govinfo.gov>.

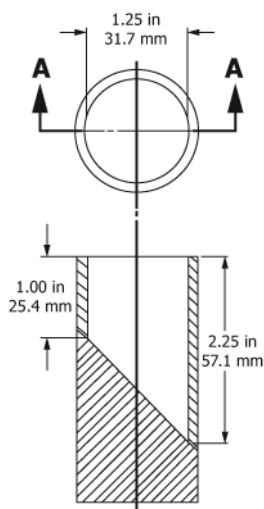


FIG. 1 Test Cylinder

4.7 Typical symptoms shall be described on the instructional literature, including that the symptoms are often non-specific (abdominal pain, fever, etc.) and that it is possible that there will be a delay in symptoms or no initial symptoms. It is important to warn consumers not to wait for symptoms to appear if it is possible that magnets have been ingested.

4.8 The instructions shall warn that the product must be kept away from pets.

4.9 The instructions shall warn that the product must be kept away from pacemakers.

4.10 Any instructions provided in addition to those required by this section shall not contradict or confuse the meaning of the required information or otherwise be misleading to the consumer.

4.11 An example of product instructions follows:

“WARNING — INTERNAL INJURY HAZARD

Swallowed magnets can damage internal organs and have resulted in DEATH and SERIOUS INJURIES.

These magnets are NOT toys. Keep away from ALL children.

[Insert Fig. 2 or comparable illustration.]

NEVER put near mouth or nose. Magnet ingestions are often accidental and there is a possibility that they will occur from:

1. Young children finding loose or missing magnets;
2. Older children and teens playing with magnets in their mouths or nose and imitating piercings.

Be aware of dropped or separated magnets. When not in use, locate all magnets and count them individually or return them to the following shape to be sure that none are missing. Store all magnets safely away from children, and in storage container.

[Insert manufacturer's recommended strategy for magnet quantity accountability.]

Seek immediate medical attention or contact the poison control center immediately if you think magnets were ingested. It is possible that X-rays or prompt surgical removal will be required. Do not wait for symptoms to appear as it is feasible that by then it will be too late for medical intervention.

Symptoms of magnet ingestion are often non-specific (abdominal pain, fever, etc.), and can take from hours to weeks to appear. By then, the damage can be severe. Untreated ingestions of magnets are likely to cause intestinal blockage, perforation, bleeding, infection, and death.

Keep away from pets.

Keep away from pacemakers.”

5. Sales/Marketing Requirements

5.1 *General*—Manufacturers shall not knowingly market or sell the product to persons under 14 years of age or to anyone known to be buying it for someone under 14 years of age.

5.2 *Retail Sales*—Manufacturers shall undertake reasonable efforts to ensure that the product is not marketed and displayed to consumers in a manner that represents the product as a toy