



Standard Specification for Low Velocity Resilient Material Projectile¹

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1. Scope

1.1 This specification covers critical characteristics of low velocity resilient material projectiles (herein referred to as LVRM projectiles) made of a resilient material, and shall have a diameter no smaller than 20 mm (0.7874 in) and no greater than 30 mm (1.18 in.), with a hardness no greater than 75 Shore 00 in accordance with Specification **D2240**. This specification helps define whether a projectile is suitable for use with a low velocity projectile marker (herein referred to as LVP marker as defined in Specification **F2574**). The weight of the LVRM projectile is not to exceed 4.0 g. Furthermore, this specification establishes minimum warning and package labeling to help ensure that the LVRM projectiles are used in a safe manner and that the risk of injury is reduced.

1.2 A LVRM projectile is not a paintball as defined in Section 2.1.2 of Specification **F1979**.

1.3 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.4 *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 and health practices and to determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D2240 Test Method for Rubber Property—Durometer Hardness

F963 Consumer Safety Specification for Toy Safety

F1776 Specification for Eye Protective Devices for Paintball Sports

F1979 Specification for Paintballs Used in the Sport of Paintball

F2574 Specification for Low Velocity Projectile Marker

2.2 *Federal Standards:*³

16 CFR 1500 Hazardous Substance Act Regulations

2.3 *ANSI Standard:*⁴

Z 535.1 Safety Color Code

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *low velocity projectile marker*—device specifically designed to discharge LVRM projectiles. The device is sometimes referred to as a low velocity projectile gun as defined in Specification **F2574**.

3.1.2 *low velocity resilient material ball*—any spherical, ovoid, or ellipsoidal object. The term “ball” also includes any multisided object formed by connecting planes into a generally spherical ovoid, or ellipsoidal shape that is designated or intended to be used as a ball. A “ball” can be a LVRM projectile.

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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. Consumer Product Safety Commission (CPSC), 4330 East-West Hwy., Bethesda, MD 20814, website: www.cpsc.gov; or U.S. Government Printing Office, Superintendent of Documents; P.O. Box 371954, Pittsburgh, PA 15250-7954, website: www.gpo.gov.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, website: www.ansi.org. Hard copies are available from Global Engineering Documents, 15 Inverness Way, East Englewood, CO 80112-5704, website: www.gpo.gov.

3.1.3 *low velocity resilient material projectile*—object propelled by means of a discharge mechanism capable of storing and releasing energy under the control of the operator comprised of a resilient material, and have a diameter no smaller than 20 mm (0.7874 in) and no greater than 30 mm (1.18 in.). The hardness of the LVRM projectile is to be no greater than 75 Shore 00 in accordance with Specification **D2240**. The weight of the LVRM projectile is not to exceed 4.0 g.

3.1.4 *range*—maximum distance to which an object may be propelled, whether limited by energy or an obstacle.

3.1.5 *shore 00*—applicable durometer type scale to measure the resistance of indentation and provide an empirical hardness value of sponge and foam materials in accordance with Specification **D2240**.

4. General Requirements

4.1 Must be made of a resilient material.

4.2 Must have a diameter no smaller than 20 mm (0.7874 in.) and no greater than 30 mm (1.18 in.).

4.3 Hardness of projectile must not be greater than 75 Shore 00 in accordance with Specification **D2240**.

4.4 The weight is not to exceed 4.0 g.

4.5 No projectile intended to be expelled shall have any sharp edges or sharp points.

4.6 No projectile expelled shall have a tip radius less than 0.08 in. (2 mm).

5. Packaging and Package Marking

5.1 General Instructions:

5.1.1 Warnings, instructions, and the name and address of the manufacturer or distributor shall appear on the exterior of each point of sale container in which a manufacturer packages its LVRM projectiles.

5.1.2 The packaging of all LVP markers shall contain a cautionary statement. The statement shall be placed prominently on the package and set distinctively apart from other wording or designs.

5.1.3 The label design, the use of vignettes, or the proximity of other labeling or lettering shall not obscure or render inconspicuous any labeling statement.

5.1.4 All labeling statements shall appear on the principal display panel and at minimum be in the English language.

5.1.5 Prominence of the statement shall be achieved by placement within the borders of a rectangle and by use of a suitable contrasting background. The statement shall be in uppercase bold face letters of a size bearing a reasonable relationship to the other type on the main panel, but no less than 8-point type. The letters in the signal word shall be at least 50 % larger than the letters in the other words in the cautionary statement. The signal word shall be preceded by a safety alert symbol. It is composed of an equilateral triangle surrounding an exclamation mark. The base of the safety alert symbol shall be on the same horizontal line as the base of the letters of the signal word. The height of the safety alert symbol shall equal or exceed the signal word height. The signal word shall be in black letters on an orange background. The solid triangle of the safety alert symbol shall be black and the exclamation point shall be orange. The cautionary statement shall have either black lettering on a white background or white lettering on a black background. When special circumstances limit the use of the warning to two colors, the colors assigned to the signal word background may also be used for the cautionary statement letters, provided that they contrast with the background color of the product. When special circumstances preclude the use of safety colors on base materials such as wood, cardboard, metal, plastic, etc., the marking used should (when feasible) contrast with the background color of the base material.

5.2 *Warning Information*—The following warning information or its equivalent shall appear as defined in **5.1**.

5.2.1 In accordance with Specification **F963** items that contain a non-spherical shape projectile for use with a LVP marker that fits within the small parts cylinder (**Fig. 1**), the labeling shall read:

WARNING:
CHOKING HAZARD—Small parts.
Not for children under 3 yrs.

5.2.2 In accordance with Specification **F963** items that contain a spherical shape projectile that is a ball for use with a LVP marker that fits within the small parts cylinder (**Fig. 1**), the labeling shall read:

WARNING: