



## Standard Specification for Low Velocity Projectile Marker<sup>1</sup>

This standard is issued under the fixed designation F2574; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This specification covers low velocity projectile markers (herein referred to as LVP marker) that propel a low velocity resilient material projectile (herein referred to as LVRM projectile as defined in Specification F2573) by means of energy released by compressed air, compressed gas, or a combination thereof, with velocity not to exceed 53.34 m/s (175 ft/s).

1.2 LVRM projectiles are made 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. The weight of the LVRM projectile is not to exceed 4.0 g.

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

1.4 The following precautionary caveat pertains only to the test method portion, Section 8, of this specification. *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.*

1.5 *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:*<sup>2</sup>

F1750 Specification for Paintball Marker Threaded-

Propellant Source Interface

F1776 Specification for Eye Protective Devices for Paintball Sports

F2573 Specification for Low Velocity Resilient Material Projectile

2.2 *ANSI Standard:*<sup>3</sup>

Z535.1 Safety Color Code

### 3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *auto-trigger, n*—trigger that, when held in the discharge position, will automatically cause the LVP marker to discharge when the pump or bolt action is manipulated.

3.1.2 *backstop, n*—object intended to stop a LVRM projectile.

3.1.3 *barrel, n*—that portion of a LVP marker through which the LVRM projectile is discharged.

3.1.4 *barrel blocking device, n*—muzzle blocking safety device that when properly installed, reduces the likelihood of an intact LVRM projectile discharging from the marker or leaving the confines of the barrel blocking device. The device is often referred to as a barrel plug or sleeve.

3.1.5 *cautionary statement, n*—warning outlined in Section 9 that is to be placed on LVP markers, packaging, and literature.

3.1.6 *disabling device, n*—device that, when activated, disables a part of the LVP marker, usually the trigger, to prevent unintentional discharges and must be released to allow the marker to be discharged by the movement of the trigger. The device is sometimes referred to as the “safety,” “safety button,” or “safety lever.” An electronic on/off switch is considered a disabling device if when placed in the “off” position, it renders the marker inoperable.

3.1.7 *discharge mode, n*—mode that controls the number of LVRM projectiles discharged per trigger cycle.

3.1.8 *feed mechanism, n*—mechanism that stores, transports, and facilitates the loading of LVRM projectiles. It may be gravity, mechanically or air assisted, or automatic in its actions.

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F08 on Sports Equipment, Playing Surfaces, and Facilities and is the direct responsibility of Subcommittee F08.24 on Paintball and Equipment.

Current edition approved Sept. 1, 2022. Published October 2022. Originally approved in 2006. Last previous edition approved in 2018 as F2574 – 06 (2018). DOI: 10.1520/F2574-06R22.

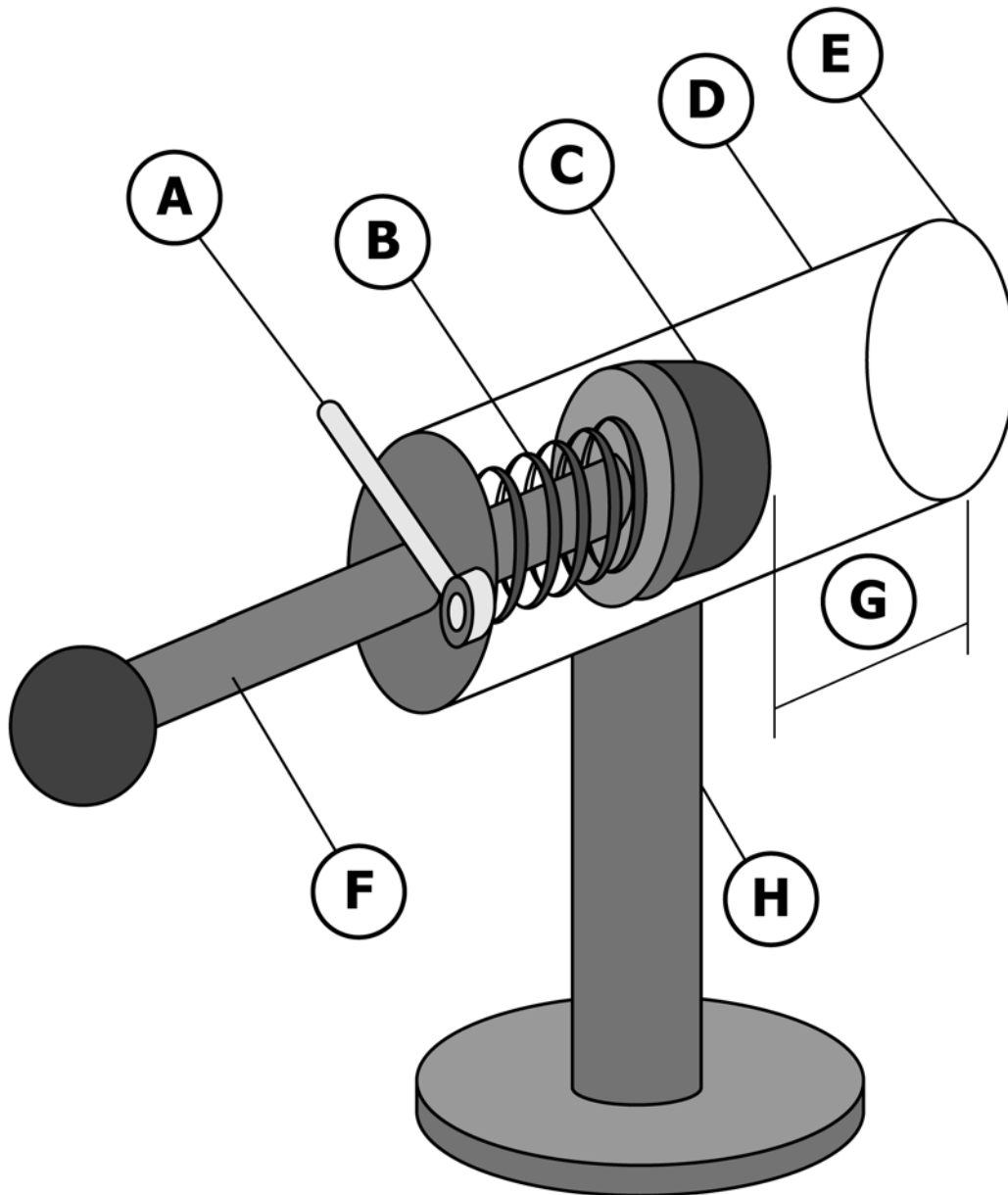
<sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

3.1.9 *hopper, n*—device used with a LVP marker to store LVRM projectiles.

3.1.10 *impact tester, n*—device used to test for accidental discharges of LVP marker. See Fig. 1.

3.1.11 *low velocity resilient material projectile, n*—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 has a diameter no smaller



- A. Release Latch
- B. Compression Spring (spring rate 1.145 kg/cm or 16.28 lb/in.)
- C. Impact Ball (new pressurized tennis ball with regular felt, total mass of moving parts is 1.13 kg or 2.5 lb)
- D. Plastic tube with 7.62 cm (3 in.) internal diameter
- E. Face placed against marker
- F. Cocking arm
- G. Stroke of 15.21 cm (6 in.)
- H. Secured support base

FIG. 1 Impact Tester