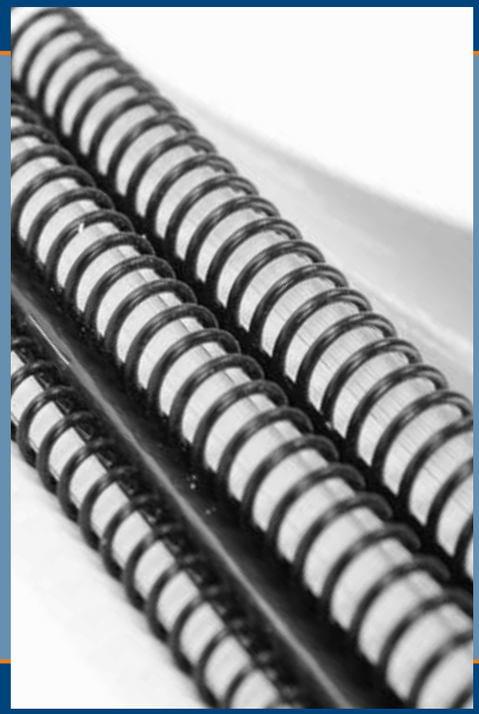
REFERENCE GUIDE: SAFETY EYEWEAR

MIL V_0 BALLISTIC TEST FOR IMPACT



At Honeywell, makers of Uvex® safety eyewear, we understand that building a culture of safety is essential to maintaining a safe workplace. We're committed to helping you create a safe organization with educational resources and tools.

This reference guide will provide you with a better understanding of the Department of Defense Mil V_0 Ballistic Test as it relates to impact testing for safety eyewear.

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REFERENCE GUIDE: SAFETY EYEWEAR – MIL V_0 BALLISTIC TEST FOR IMPACT

GENERAL INFORMATION

Below is general information about the issuing body, the specification itself as well as the most recent versions of the relevant specifications.

This specification—often referred to as the Military Velocity Sub-zero or Military V_0 Ballistic Test for Impact—incorporates the MIL-PRF specifications as well as the MIL-STD-662 standards.

DEPARTMENT OF DEFENSE MILITARY STANDARDS & SPECIFICATIONS

Governmental branch which designs performance standards (Mil-STDs) to achieve standardization objectives.

MCEPS

Requirements and Verification of Military Combat Eye Protection System (MCEPS).

Requirements include system configuration, materials/characteristics, durability, human factors, hazards, marking, workmanship, compliance and flammability. Verification includes inspections, examinations, performance testing (including ballistic characteristics).

CURRENT VERSIONS

Standard: MIL-STD-662
V50 Ballistic Test for Armor

Specification: MIL-PRF-31013
Military Combat Eye Protection System (MCEPS) must meet MIL-PRF-31013 including ballistic resistance per MIL-STD-662. This specification to be superseded in 2009 by new version (below) which will contain a reference to MIL-STD-662. *Updated 1996*

Specification: MIL-PRF-ZZZZZ
Draft version of new specification used currently as reference. To be converted to specific number MIL-PRF upon acceptance.

OUTLINE

BRIEF EXCERPT

2.2.1 Specifications, Standards & Handbooks

Dept. of Defense Standard: MIL-STD-662 V50 Ballistic Test for Armor

3.5.1.1 Ballistic Resistance – Performance

Pass V_0 test using 0.15 caliber, 5.8 grain, T37 shaped projectile at 640-660 feet/second velocity.

NOTE: This specification represents impact energy 7x greater than that of the ANSI and CSA standards.

4.4.1.1 Ballistic Resistance – Test Methods

Test conducted as specified in MIL-STD-662.

DETAILED OVERVIEW

2.2.1 Specifications, Standards & Handbooks

The following specifications, standards and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (See 6.2).

STANDARDS
- FEDERAL: A-A-55273 Retainer, Eyewear
- MILITARY: MIL-STD-662 V50 Ballistic Test for Armor

3.5.1.1 Ballistic Resistance – Performance

The ballistic resistance of the spectacles shall be such that they will pass a V_0 test using a 0.15 caliber, 5.8 grain, T37 shaped projectile at a velocity of 640 to 660 feet per second when tested as specified in 4.4.1.1.

4.4.1.1 Ballistic Resistance – Test Methods

The test shall be a V_0 test conducted as specified in MIL-STD-662 using a 0.15 caliber, 5.8 grain, T37 shaped projectile (see Figure 3) with the following exceptions: electronic velocity detection devices (light beam or acoustic type) may be used to determine the velocity of the projectile, such devices placed no less than 8 inches and no more than 24 inches from the target; compressed gas propulsion of the projectile may be used. The eyewear shall be mounted on an Alderson 50th percentile male headform in the as-worn position. The 0.002 inch thick aluminum foil witness sheet shall be mounted within 2 inches of the eyewear behind the area of impact. The sample shall be hit once at normal incidence within a one-inch diameter at a point centered vertically and at a horizontal distance of 32 mm from the centerline. The sample shall be considered a failure if the aluminum foil witness sheet is punctured or if the sample is cracked.