

Protective Eyewear



Zero Officers Killed or Injured



Protective Eyewear

- 2.4 Million Americans a year suffer an eye injury
- Eye injuries are the #1 cause of preventable blindness in the United States
- 90% of all injuries could have been prevented with the use of eye safety protection



Protective Eyewear

- **Common Causes**

- Flying Particles (70% of all accidents)
- Chemicals (20% of all injuries)
- Attached or Swinging Objects
- UV Exposure



Protective Eyewear

- **Authorized Protective Eyewear List (APEL)**
 - List of eyewear that meets standards for ballistic and UV protection
 - Statistics show that the APEL program has helped reduce eye injuries by 40%
 - 30% of soldiers responding to a current survey stated that their APEL eyewear saved their eyes from injury.

Protective Eyewear



"...the sniper's bullet hit my gun mount and continued on to fragment and splatter on the right lens of my <MIL Spec> sunglasses. While I was knocked down with the impact of the bullet, I suffered only minor injuries to my head and was back in action within the week."

-Sgt. Ross Shores of the 172nd Stryker Brigade



Images courtesy of ESS, Inc.



Protective Eyewear

- **Eye Pro Standards**

- **ANSI Z87.1**

- American National Standards Institute

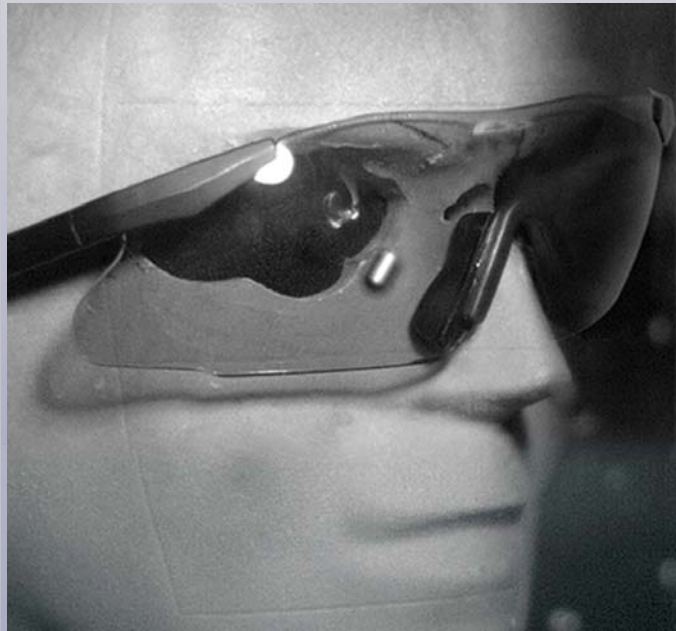
- **Military Specifications (MIL SPEC)**

- Ballistic Resistance:

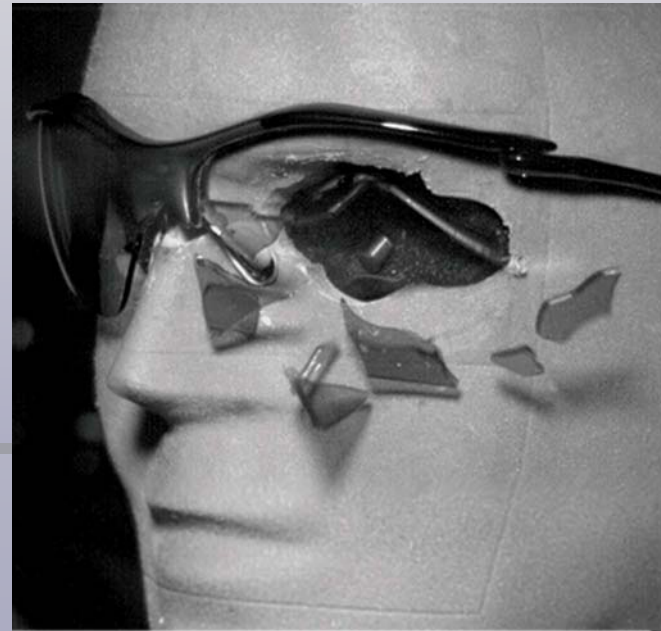
- Spectacles MIL-PRF 31013 = V_0 of .15 caliber projectile at 650 ft/sec
- Goggles MIL-STD-662 = V_0 of .22 caliber projectile at 560 ft/sec

Protective Eyewear

Images of the impact effects on spectacles tested to the MIL Spec MIL PRF 31013



MIL Spec Eye Pro



ANSI Z87.1 Eye Pro

Both test subject spectacles have polycarbonate lenses, but dramatically different capabilities

Protective Eyewear



Eyewear meeting MIL Specs have been shown to stop shotgun blasts from approximately 10 meters.



Protective Eyewear

- **Hazards Law Enforcement Officers Face**
 - Handle firearms and explosives
 - Exposure to body fluids/blood borne pathogens
 - Automobile accidents and potential for fragmentation
 - Other similar threats to eye safety as common occupational hazards

Protective Eyewear

- **Authorized Protective Eyewear List**

<https://peosoldier.army.mil/pmequipment/eyewear.asp>

- **Body Specs – Pistol**
 - www.bodyspecs.com/
- **Eye Safety Systems (ESS) - ICE2**
 - www.esseyepro.com/
- **Revision – Sawfly**
 - www.revisioneyewear.com/
- **UVEX – XC**
 - www.uvex.us/
- **Oakley - SI Ballistic M Frame**
 - www.oakley.com/
- **Wiley - X-PT-1 and X-SG-1**
 - www.wileyx.com



There are several other commercially available brands and models that meet MIL SPEC not specifically listed on the APEL.