

Comparison of CSA and ANSI Eye Protection Standards

1. ANSI Standard includes “Non-Impact” eye and face protectors that do not protect the wearer from hazards of a high velocity nature or high mass nature. High velocity impact tests involve propelling a 0.25 inch diameter steel ball at the complete protective device at a velocity between 45.72 m/s and 91.44 m/s, depending on the device. High mass impact tests involve dropping a pointed projectile weighing 500 g from a height of 127 cm on to the complete protective device. The lenses and frames of protectors that pass the high mass impact and high velocity impact tests are deemed “Impact” rated and are marked with a “+” symbol to indicate the impact protection provided.
2. ANSI Standard has a higher velocity requirement for High Velocity Impact tests conducted on goggle lenses and frames, full face piece respirators, face shields, welding helmets and welding hand shields. PPE007 — Eye Protection at the Work Site 4 June 2012
3. ANSI Standard has a High Mass Impact performance requirement for spectacle lenses (non-prescription) and frames, goggle lenses and frames, welding helmets and hand shields, full face piece respirators and face shields.
4. ANSI Standard has a Penetration Test performance requirement for spectacle lenses (non-prescription), goggle lenses, welding helmet and hand shield lenses, full face piece respirators and face shields. The complete protective device passes this test if a weighted needle with a total weight of 44.2 g dropped from a height of 127 cm fails to penetrate the lens.
5. ANSI Standard specifies minimum thickness requirements for spectacle lenses, goggle lenses (basic impact type only), face shields and welding helmet and hand shield lenses, whereas the CSA Standard only specifies minimum thickness requirements for non-glass prescription lenses.
6. CSA Standard specifies minimum frontal and side coverage dimensions for spectacle lens and side protectors, and minimum dimensions for face shield windows and welding helmet and hand shield filter/cover plates, whereas the ANSI Standard only specifies minimum frontal and side coverage dimensions for spectacle lens and side protectors.
7. CSA Standard requires side protection on all spectacles, whereas the ANSI Standard only requires side protection on spectacles which are Impact Rated.
8. CSA Standard specifies a minimum field of view requirement for goggles and Class 7A and 7C respirators.
9. Protective eyewear must be certified by CSA (or other accredited agency) as meeting the requirements outlined in the standard in order to bear the CSA mark (or accrediting agency’s mark).