

IMPACT-RESISTANT *DRESS* PRESCRIPTION EYEWEAR

Impact-Resistance

Beginning in 1972, the FDA required that all dress eyewear glass lenses be hardened to resist light impacts. In addition, there is no minimum thickness requirement, and lenses are generally 1.5 mm to 2.0 mm in thickness.

Use

These “everyday” glasses can be worn during normal activities, but should not be confused with sports or occupational eyewear. Dress eyewear does not meet OSHA requirements for on-the-job use where the potential for eye hazards exist.

Features

Dress eyewear frames do not need to pass the same rigorous ANSI tests as required on occupational eyewear frames. They are generally thinner and lighter in weight than occupational eyewear frames. The size of the frame is also less important and more of a fashion statement than an issue of function.

Testing

To meet FDA requirements, dress eyewear lenses must withstand the impact of a 5/8” steel ball freely dropped from a height of 50 inches under specific conditions.

IMPACT-RESISTANT *OCCUPATIONAL* PRESCRIPTION EYEWEAR

Impact-Resistance

Frames that meet the ANSI Z87.1-2003 Standard must be marked “Z87-2”, or be certified to have met the standard. Glass and Plastic lenses must be a minimum of 3.0 mm in thickness and are considered Basic Impact Protectors. Lenses will be marked with the manufacturer’s logo. Basic Impact Protectors require a warning label to be removed by the wearer.

Polycarbonate lenses can be manufactured to minimum thickness of 2.0 mm and are considered High Impact Protectors. Lenses are to be marked with the manufacturer’s logo and a plus (+) sign.

Use

Occupational eyewear should be worn whenever there is a risk of injury to the eyes due to impact, heat, chemical, dust, or optical radiation hazards.

Features

Occupational eyewear frames must meet strict ANSI standards by passing rigorous high mass and high speed impact tests. They are generally a little thicker and heavier than dress eyewear, and the lens bevel is designed to prevent the lens from being pushed back into the eye. Side protection in the form of sideshields is also an important feature of occupational eyewear frames.

Testing

To meet ANSI Z87.1-2003 Standards, occupational eyewear Basic Impact lenses (Glass and Plastic) must withstand the free drop of a 1” steel ball from 50 inches under specific conditions.

High Impact lenses (Poly) must withstand an impact from a steel ball traveling at roughly 200 miles per hour.