

## 6.2.5 Prescription Lens Material Qualification

When tested in accordance with Section 9.14, representative test lenses for use in prescription protectors shall be capable of resisting impact from either a 6.0 mm (0.24 in.) or a 6.35 mm (0.25 in.) diameter steel ball traveling at the respective velocities specified in Table 5.

When tested in accordance with this section, the lens shall fail if any of the following occurs:

- posterior displacement of the lens completely through the test holder;
- fracture of the lens;
- any detachment of a portion of the lens from its inner surface; or
- any full thickness penetration of a lens.

Failure of any lens constitutes a failure. If all test lenses pass, then any prescription lens of the same or greater thickness at its thinnest point, which is made by the same manufacturer, from the same material, with the same coatings and processes may bear the "+" mark.

## 9.14 Prescription Lenses Test

### 9.14.1 Purpose

This test is intended to determine the ability of prescription lens materials and individual coatings and processes applied to those materials to withstand impact from high velocity, low mass projectiles.

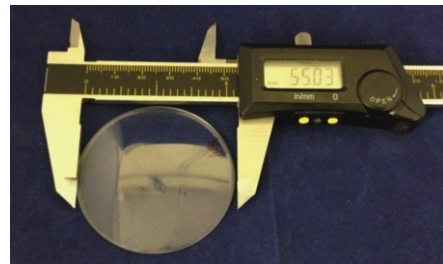
### 9.14.2 Procedure

Representative test lenses having a nominal plano power and a maximum base curve of 6.25 diopter, and the minimum lens thickness to be used by the manufacturer, in no case less than 2.0 mm (0.079 in.), shall be edged round with a uniform  $115^{\circ} \pm 5^{\circ}$  included angle bevel to a diameter 55.0 mm  $+0.04$  mm/ $-0.25$  mm (2.17 + 0.002/-0.01 in.).

Each lens shall be tested once, with a new lens used for each additional impact. Each lens shall be mounted in a steel test holder by two retaining washers so that the test lens is held firmly against the bevel of the lens holder (See Figure E7). Perform the high velocity impact test on the center of each lens with the projectile and velocity determination as specified for spectacles in Table 5. Three lenses shall be tested.



Uniform  $115^{\circ} \pm 5^{\circ}$  included angle bevel  
(V bevel)



Diameter 55.0 mm  $+0.04$  mm/ $-0.25$  mm



Fixture that holds test lenses that are edged round with a uniform  $115^{\circ} \pm 5^{\circ}$  included angle bevel to a diameter 55.0 mm  $+0.04$  mm/ $-0.25$  mm (2.17 + 0.002/- 0.01 in.)