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### LENS MATERIALS

When you order glasses, you will need to specify a lens material. Each has its own list of advantages and disadvantages.

Regular plastic (**CR-39**) is a good go-to for ordinary uses. It is the best optically—the clearest vision, especially to the side but it lacks the impact resistance of materials such as polycarbonate, or the thinness/lightweight of high index plastic.

**Polycarbonate** is very impact resistant, has built-in ultraviolet protection, is lightweight, and only moderately more expensive than CR-39. But it does have more chance of producing mild color fringing in its periphery. So when you look to the side through the lens you might see some of this, which is not bothersome to most wearers but a problem to others.

**High index plastic** is impact resistant and very thin. It has optics almost as good as CR-39 plastic. Ultraviolet blocking is good. But these advantages do come at a dollar cost.

**Trivex** is a blend of CR-39 and polycarbonate. It has modestly improved thinness over regular plastic and excellent impact resistance. The color fringing found in pure polycarbonate is almost completely absent. Ultraviolet blocking is excellent. The cost, however, is higher than in polycarbonate.

**Glass** is legendary for scratch resistance, but it is heavy—over double the weight of CR-39. The impact resistance of glass material is significantly less than in all other materials. Thus, tempering of the lenses in manufacturing is a must. Still, the lens will not be as impact resistant as in other materials, Ultraviolet blocking is poor compared with all other materials; although if the lenses are made with the Photogrey tint they become a good ultraviolet absorber.

