VISION-EASE LENS
WORLDWIDE

Close This Document

PRINT

Technical Services Department

# Technical Tip

## Polycarbonate Edging

### There are three basics in successful polycarbonate edging:

- **Clean:** Remove all debris from edging chamber.
- **Dry:** No moisture should be present while reducing size.
- **Slow Down:** Typical removal rate of 5.0mm increments.

### Polycarbonate's unique qualities process differently than other ophthalmic materials:

- High index lenses may crack from the edges as a result of lenses cut in a method that creates too much heat or stress. These may not be visible for weeks after processing.
- Always use sharp, dry cutting wheels. Edging temperatures have been measured over 600°F – near the melting point of polycarbonate – when using dull, damp cutting wheels.

### The following recommendations will help you in achieving high quality:

- Remove cutting debris from clamping pads.
- Make sure the diamond wheels are sharp and free of debris.
- If edging plastic and polycarbonate lenses, alternate the materials. The plastic lenses will "clean" the wheels between polycarbonate lenses.
- Router style edgers produce the least amount of heat during operation.
- Do not allow any moisture contact with the cutting surface while reducing lens size. Any moisture on the cutting surface will actually increase cutting heat with polycarbonate.
- Remove cutting debris from edging chamber between each lens.
- Slowly reduce size while reducing lens. Removing too much material at once will induce stress and possibly create block slippage.
- Wet edge polishing can be successful on an edger, as long as no size reduction takes place at this time.
- Size lenses precisely to frame. Polycarbonate does not dry out and shrink like other materials.
- Light safety beveling/chamfering on front and backsides helps remove edging stress.
- Assure exact shape match to frame.
- Do not use any solvents or alcohol in cleaning or edge treatments. Isopropyl alcohol (IPA) is safe to use.

**Polycarbonate lenses are the most durable on the market today, but heat, stress, or chemicals can permanently damage the lens.**

For any additional technical questions, call the toll-free Technical Services Hotline: (800) 367-2544 ext. 5301
You can also send messages to us via e-mail: techservices@vision-ease.com
This Technical Tip is provided to you by the Technical Services Group of Vision-Ease Lens, 6975 Saukview Drive, Suite 104, St. Cloud, MN, 56303, USA