



MANUFACTURING AND PRODUCTION

Flat Glass Processing: Cutting, Toughening and Laminating

3 day course

Classroom, online or in-house

Course overview

Processed glass is expensive, fragile and made to measure, so a fault discovered after toughening is a total loss rather than a rework, and the fault was usually introduced at the cutting table. This course works in that order. Delegates work through float glass properties, thickness, and the stress state a processor inherits. Cutting is covered including scoring, breaking, and the edge quality that determines whether a pane survives toughening. Edgework follows through grinding, seaming and polishing. Drilling and shaping are addressed with their minimum dimension rules. Toughening is covered in operational detail: heating, quenching, the surface compression achieved and the fragmentation test that proves it. Roller wave, bow and anisotropy are treated as the quality limits of the process. Heat soaking and nickel sulphide inclusions are addressed, since spontaneous breakage is the industry's most costly failure. Laminating follows through interlayer handling, assembly, nipping and autoclaving. Insulated glass units are covered. The course closes on handling, packing and site breakage claims.

What you will learn

- Relate float glass properties to what a processor can achieve
- Cut and break with edge quality that survives toughening
- Grind, seam, polish, drill and shape within minimum dimension rules
- Toughen to specified surface compression and verify by fragmentation
- Manage roller wave, bow and anisotropy
- Heat soak to address nickel sulphide inclusions
- Laminate and assemble insulated units, then handle and pack safely

Who should attend

- Glass processing plant operators and supervisors
- Quality staff in toughening and laminating
- Glaziers and window fabricators
- Engineers specifying processed glass
- Production managers at glass processors

Course outline

- 01 A fault after toughening is a total loss
- 02 Float glass properties and inherited stress
- 03 Scoring, breaking and edge quality
- 04 Edgework, drilling and shaping
- 05 Toughening, quenching and surface compression
- 06 Fragmentation testing, roller wave and anisotropy
- 07 Heat soaking and nickel sulphide inclusions
- 08 Laminating, insulated units, handling and breakage claims

Upcoming dates

Dates	Venue	Format	Fee per delegate
14 to 16 December 2026	Harare, Zimbabwe	Classroom	USD 995
8 to 10 February 2027	Online	Online	R6,500
17 to 19 February 2027	Lusaka, Zambia	Classroom	USD 995



Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** in the classroom elsewhere in Africa. In-house training is quotation on request. Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit www.afrisciencegroup.com, email info@afriscience.co.za, or WhatsApp us on **+27 63 479 1136**.

AfriScience Group | +27 61 536 6531 | info@afriscience.co.za | Pretoria, Gauteng, South Africa