



MANUFACTURING AND PRODUCTION

Thermoforming and Rigid Packaging Production

3 day course

Classroom, online or in-house

Course overview

Thermoforming distributes a fixed sheet thickness over a shape, so the deepest part of the part is always the thinnest, and a design that ignores that produces containers that fail where they are loaded. This course starts from the material distribution. Delegates work through sheet properties, extruded sheet quality and the moisture and orientation that affect forming. Heating is covered, including radiant heat transfer, sheet sag and the temperature window a polymer forms within. Forming methods follow across vacuum, pressure and plug assist, with the wall distribution each achieves. Mould design and cooling are addressed. Trimming is covered across in line and off line methods, with the tolerance each holds. Scrap and regrind are addressed, since skeletal waste is a large share of the material. Defects are diagnosed: webbing, chill marks, thin corners and poor detail. Stacking, nesting and denesting follow. The course closes on part performance testing and on tooling for a new pack.

What you will learn

- Assess sheet quality, moisture and orientation before forming
- Heat sheet within the polymer's forming window and control sag
- Compare vacuum, pressure and plug assist wall distribution
- Design moulds and cooling for thermoforming
- Select trimming methods for the tolerance required
- Manage skeletal scrap and regrind
- Diagnose webbing, chill marks and thin corners, and test part performance

Who should attend

- Thermoforming machine operators and setters
- Process engineers in rigid packaging
- Packaging developers specifying formed packs
- Quality staff on formed products
- Production supervisors in thermoforming plants

Course outline

- 01 The deepest point is the thinnest
- 02 Sheet properties, moisture and orientation
- 03 Heating, radiant transfer and sag
- 04 The forming window
- 05 Vacuum, pressure and plug assist
- 06 Mould design and cooling
- 07 Trimming methods and tolerance
- 08 Scrap and regrind, defects, stacking and tooling

Upcoming dates

Dates	Venue	Format	Fee per delegate
21 to 23 October 2026	Online	Online	R6,500
9 to 11 December 2026	Cape Town, South Africa	Classroom	R14,950
15 to 17 March 2027	Durban, South Africa	Classroom	R14,950



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