Packaging purposes

Purpose	• Physical protection • Barrier protection • Containment or agglomeration • Information transmission • Marketing • Security • Convenience • Portion control
Types:	• Primary, the material that holds and contains the product • Secondary, the material outside the primary packaging, often used to group primary packages together • Tertiary and packaging systems, the material used for bulk handling, warehousing and transportation
Primary containes:	Bottles, cans, kegs, casks [immediate and future consumption, can be one-use or refillable]
Closure:	Single opener, resealable, functions as dust cover and tampering seal
Secondary packaging:	Enable tertiary packaging • Protect primary packaging against damage during transport and distribution • Provide handy clusters easy and convenient for consumers to handle • Promote the products towards customers and consumers
Tertiary:	Pallets lmao
Inspec-tions:	neck, sidewall, inner sidewall, base, bottle colour, caustic/r-esidual liquid, scuffing

Preforms, PET

Onestage	PET pre-forms are produced and blown into finished bottles in the same machine.
Two-stage process	PET pre-forms are produced and stored in containers. One advantage is that the pre-forms take up less space than the finished bottles.

Berg's Capacity - V!

Concept	Make sure the filler is the slowest part to ensure no holdups

Filling

Main focus:	Avoid beer loss
	Ensure nominal fill
	Avoid contamination, precent air and oxidation, avoid CO2 loss
Types of filling	Counter pressure (Level filling, Volumetric filling[Metering chamber with transsonar level probes])
	Gravity filling
	Mechanical valve (Conventional), Electro-pneumatic valve
When to do what:	Level filling • Returnableandnon-r-eturnableglassbottles • Returnable PET bottles (regardless of size) • Smalldiametercontainers
	Volumetric filling • Dimensionala-ccuratecontainers • Large diameter containers (in neck area) • Nonetransparentcontainers • Typically: High quality one way plastic bottles and cans of larger volumes

Pasteurisation

PU	1 PU is 1 minute at 60°C .
Formula	PU = t * 1.393^(T-60)
Flash Pasteu-risation	Beer is heated in a plate heat exchanger, held at 68–72°-Cfor30– 50 sec, then cooled down again

Labelling

Types	Cold glue vs self adhesive