AQL 0.1 explained.

And what it means for your cost per procedure.

What AQL is, and why 0.1 matters.

AQL — Acceptable Quality Limit — is the manufacturing quality standard for surgical gloves under EN 455-1. It defines how many defective gloves a production lot may contain before the entire lot is rejected and cannot be sold. The lower the AQL, the stricter the control.

How the AQL test works

200 gloves

Each production lot is sampled. A typical lot contains 35,000–150,000 gloves. From every lot, 200 gloves are drawn at random for testing.

Water test

The 200 gloves are hung upside down and filled with 1 litre of water each.

Leaks inspection

A trained technician checks every glove for visible leakage — the evidence of a micro-perforation invisible to the eye.

AQL definition

The AQL level sets how many defective gloves may be found in the 200-glove sample before the entire lot is rejected.

Released or rejected

A lot that meets the threshold is shipped. A lot that exceeds it is destroyed.

AQL standards comparison – surgical gloves

ISO 2859-1 single sampling plan · 200-glove inspection per production lot

AQL Level	Defective Gloves Accepted (per 200-glove sample)	Applicable Standard
1,5	up to 7	EN 455-1 – examination gloves
0,65	up to 3	EN 455-1 – surgical gloves
0,4	up to 2	Common premium-tier surgical gloves
0,1	**0**	**Peha®-skin**

Peha®-skin

At AQL 0.1, no defective glove may pass: a single leak in the 200-glove sample causes the whole lot to be rejected. This is the strictest acceptance threshold in surgery — a statistical zero-defect standard. The risk of a defective glove reaching your OR approaches zero.

Fewer defects = lower total cost

A lower AQL means fewer defective gloves are released for use. Fewer defective gloves means less sterile waste, fewer mid-procedure glove changes, and less staff time spent handling defective stock — even when the price per pair is higher.

Annual cost impact

Cost component	AQL 0.65 (surgical norm)	AQL 0.1 (Peha®-skin)
	Up to 3 defective gloves per 200 tested = approx. 750 defective pairs per year	**0 defective pairs**
Cost for 50,000 pairs	€54.000	**€59.500**
Defective gloves released into stock	750 pairs	**0 pairs**
Replacement cost for defective gloves	€810	–
Defect handling cost (12.5 staff hours wasted)	€13.755	–
Complaint handling cost (150 complaints filed)	€475	–
Waste disposal cost (7.5 kg plastic waste)	€750	–
TOTAL ANNUAL COST	€69.790	**€59.500**
Annual saving with Peha®-skin		**≈ €10.000**

The numbers above are based on Hartmann's internal cost model for AQL 0.1 versus AQL 0.65, at a hospital consuming 50,000 pairs of surgical gloves per year. Actual savings depend on hospital consumption, current glove pricing and defect-handling processes.

Source: Hartmann internal AQL Impact / ROI Calculator.

Why this matters beyond the number

The €10,000 figure represents a typical scenario. Actual savings depend on your hospital's consumption volume, current glove pricing, and how defective gloves are handled today. But the underlying logic holds across volumes: a stricter AQL removes the avoidable cost of defects, and at sufficient scale, the operational savings outweigh the price premium.

It also removes a category of risk that has nothing to do with surgery itself. Defective gloves released to the OR are an avoidable source of exposure — for the surgeon and the patient.