

AQL Sampling Reference Guide

Acceptable Quality Level (AQL) is the international standard (ISO 2859-1 / ANSI/ASQ Z1.4) used to determine how many units to inspect from a batch and how many defects are acceptable before a shipment is rejected. Africa Opal uses AQL in all product inspections. This guide explains how to read and apply AQL tables.

1. What is AQL?

AQL defines the **maximum acceptable percentage of defective units** in a batch. A lower AQL means a stricter standard. For example, AQL 1.0 means that in a statistically acceptable batch, no more than 1% of units may be defective. The three standard AQL levels used in trade are:

AQL Level	Defect Type	Acceptable Defect Rate	Typical Use
AQL 0.65	Critical	0.65%	Safety hazards, legal non-compliance
AQL 2.5	Major	2.5%	Functional defects, saleable condition
AQL 4.0	Minor	4.0%	Cosmetic defects, minor appearance issues

2. Step 1 — Determine Inspection Level

The Inspection Level determines the sample size relative to the batch size. **General Inspection Level II** is the standard used in most consumer goods trade. Level I gives a smaller sample (less rigorous). Level III is larger (more rigorous).

3. Step 2 — Find the Sample Size Code Letter

Lot / Batch Size (units)	Insp. Level I	Insp. Level II	Insp. Level III
2 – 8	A	A	B
9 – 15	A	B	C
16 – 25	B	C	D
26 – 50	C	D	E
51 – 90	C	E	F
91 – 150	D	F	G
151 – 280	E	G	H
281 – 500	F	H	J
501 – 1,200	G	J	K
1,201 – 3,200	H	K	L
3,201 – 10,000	J	L	M
10,001 – 35,000	K	M	N

Lot / Batch Size (units)	Insp. Level I	Insp. Level II	Insp. Level III
35,001 – 150,000	L	N	P
150,001 – 500,000	M	P	Q
500,001 and over	N	Q	R

4. Step 3 — Find Sample Size and Accept/Reject Numbers

Once you have the code letter, use the table below to find the sample size and the Accept (Ac) / Reject (Re) numbers for each AQL level. Ac = maximum number of defects allowed to pass. Re = number at which the batch is rejected.

Code	Sample Size	AQL 0.65 Ac/Re	AQL 1.0 Ac/Re	AQL 1.5 Ac/Re	AQL 2.5 Ac/Re	AQL 4.0 Ac/Re	AQL 6.5 Ac/Re
A	2	0/1	0/1	0/1	0/1	0/1	0/1
B	3	0/1	0/1	0/1	0/1	0/1	0/1
C	5	0/1	0/1	0/1	0/1	0/1	0/1
D	8	0/1	0/1	0/1	0/1	0/1	1/2
E	13	0/1	0/1	0/1	0/1	1/2	1/2
F	20	0/1	0/1	0/1	1/2	1/2	2/3
G	32	0/1	0/1	1/2	1/2	2/3	3/4
H	50	0/1	1/2	1/2	2/3	3/4	5/6
J	80	1/2	1/2	2/3	3/4	5/6	7/8
K	125	1/2	2/3	3/4	5/6	7/8	10/11
L	200	2/3	3/4	5/6	7/8	10/11	14/15
M	315	3/4	5/6	7/8	10/11	14/15	21/22
N	500	5/6	7/8	10/11	14/15	21/22	21/22
P	800	7/8	10/11	14/15	21/22	21/22	21/22
Q	1250	10/11	14/15	21/22	21/22	21/22	21/22
R	2000	14/15	21/22	21/22	21/22	21/22	21/22

5. Worked Example

Order: 3,000 units of steel shelving brackets. Step 1 – Inspection Level II → Lot size 1,201–3,200 → Code Letter L Step 2 – Code L → Sample Size = 200 units Step 3 – AQL 2.5 (Major): Ac=7 / Re=8 | AQL 4.0 (Minor): Ac=10 / Re=11 | AQL 0.65 (Critical): Ac=2 / Re=3 Result: If inspector finds 8 major defects in 200 units → FAIL (reject number reached).

6. Defect Classification Quick Reference



Defect Type	Definition	AQL Standard	Example
Critical	Could cause injury, legal liability or safety hazard	AQL 0.065	Exposed wiring, sharp metal edges, toxic material
Major	Likely to be rejected by end buyer, fails function	AQL 2.5	Wrong colour, item doesn't work, missing part
Minor	Cosmetic issue unlikely to affect sale or function	AQL 4.0	Small scratch, slight colour variation, minor mark

Questions about AQL levels for your product? Contact us: sales@africaopal.co.zw | +263 771 755 585 | africaopal.co.zw