

1. GENERAL CONDITIONS

- These QUALITY REQUIREMENTS apply to starters and define the warranty given by the supplier.
- The supplier warrants the starters delivered to be in compliance with the QUALITY AND SAFETY REQUIREMENTS, as defined in section 3.
- For quality approval of a starter shipment, an inspection may be performed by the recipient, based on sampling plans according to the QUALITY AND SAFETY REQUIREMENTS in section 3. of these QUALITY REQUIREMENTS.

2. CONDITIONS OF ACCEPTANCE AND REJECTION

- Lots inspected in accordance with this specification and found to comply with the requirements shall be accepted. Lots which do not comply may be rejected.
- In case of a rejection, the recipient shall communicate the results of the inspection, as well as manufacturing date, lot number and product description of the rejected material immediately to the supplier.
- The supplier will determine the further treatment of a rejected lot and instruct the recipient, accordingly.
- Changes or amendments to this specification become only valid after these have been mutually agreed upon in writing.

3. QUALITY AND SAFETY REQUIREMENTS**3.1 DEFINITION OF TERMS.**

- Inspection lot is the quantity of products from which a sample is to be draw and inspected to determine conformance with the acceptability criteria. It consists of starters of a single type.
- Test quantity is the number of individual glowbottles to be tested to determine conformance with the acceptability criteria.
- Test unit is one starters.
- Defect is a non-conformity of an inspected unit with the respective quality specification.
- Defective unit is a starters which contains one or more defects, or a box or a label with faulty information.

3.2 DEFINITION OF DEFECTS**3.2.1 QUALITATIVE DEFECTS**

May be identified by visual inspection without extensive test equipment.

3.2.1.1 CRITICAL DEFECTS (CODE CA-..)

Are likely to result in unsafe conditions for individuals using or maintaining the product, or to be seriously detrimental to commercial interest.

CODE**CA-01 ALIEN BRAND**

On starter housing, box or label.

CA-02 SHORT CIRCUIT (STARTER WITH METAL CAN)

Insulation resistance between pins and metal can 500 K-ohm, test voltage: 500 VDC.

CA-03 LOOSE BASE

Base disassembles from the starter can during insertion or removal from the starter holder.

CA-04 BURNED ENCLOSURE/MELTED

Glowbottle overheats melting the plastic enclosure.

CA-05 LOOSE BIMETAL

The bimetal in the glowbottle is not welded to the electrode leaving the starter inoperative or causing burn-out.

CA-06 OTHER CRITICAL

Any other critical defect that is not mentioned in this list.

3.2.1.2 VITAL DEFECTS (CODE VA-..)

Render a product inoperative or otherwise useless.

CODE

VA-01 MISSING PRODUCT.

Quality of product is less than specified on packing unit.

VA-02 MIXED PRODUCT

Two or more starter types in the same box.

VA-03 WRONG ETCH OR LABEL

Type designation on can or label missing or wrong.

VA-04 LOOSE PINS

Before or after insertion into starter holder or gauge.

VA-05 BUTTON DEFECT (COP ONLY)

Missing button, or released button as received.

VA-06 INOPERATIVE.

Glowbottle without gas or inner not crimped to base. Lamp does not start.

VA-07 SHORT CIRCUITIT (GB. COND.)

Bimetal is soldered to the opposite electrode or the electrodes of the glowbottle are making contact between them.

VA-08 POOR SOLDER

Electrodes are not properly soldered to the pins.

VA-09 PERFORATED CONDENSER

Mylar tape on the condenser it's perforated.

VA-10 ELECTRODE OUT

Starter with a glowbottle electrode out of the pin base, not permitting electrical contact and leaving the starter inoperative.

VA-11 VITAL BROKEN TIP

Glowbottle tip is broken provoking gas leakage and making the product inoperative.

VA-12 CRACKED GLOWBOTTLE

Breaking through which the gas on the glowbottle leaks.

VA-13 BROKEN BEAD

Broken piece of the glass bead is loose inside the glowbottle.

VA-14 TEST (CONDENSER)

Starter that requires a condenser and doesn't have one.

VA-15 BROKEN ELECTRODE

Electrode that brakes on the knots; the starter becomes inoperative.

VA-16 BURNED/DAMAGED ELECTRODE

Glowbottle with burned or damaged electrodes; the starter becomes inoperative.

VA-17 NO GAS

Gas leak in the glowbottle caused by glass fracture; the starter becomes inoperative.

VA-18 BAD AGING

Glowbottle with incomplete aging cycle becomes unstable, this prevents the starter from igniting the fluorescent lamp.

VA-19 NO SEAL

A Glowbottle without seal has a poor subsection of the electrodes, facilitates the gas leakage and leaves the starter inoperative.

VA-20 DEFECTIVE BEAD

Deformed, high, low or bent bead towards the walls of the glowbottle; the starter becomes inoperative.

VA-21 OTHER VITAL

Any other vital defect that is not mentioned in this list.

3.2.1.3 MAJOR DEFECTS (Código MA-..)

Reduce materially the usability of the product or constitute a severe appearance defects.

CODE**MA-01 BROKEN ENCLOSURE**

Starter enclosure with complete or partial burst anywhere on it's surface, giving access to internal electrical components. Also considered as a product appearance defect, visible to the client.

MA-02 ARCING

Electric discharge between electrodes.

MA-03 GLOW CURRENT

Incandescent glowbottle with rms current $\geq 5\text{mA}$ after lamp starting, that causes blinking in the intensity of the fluorescent lamp (flickering).

MA-04 BROKEN BASE

Base of the starter with fracture or burst visible to the client. Not yet coming off the enclosure but it is weak.

MA-05 LOOSE PIN

Pin of the starter base not well riveted to the base and is prone to become loose.

MA-06 OTHER MAYOR

Any other major defect than is not mentioned in this list.

3.2.1.4 MINOR DEFECTS (CODE NA-..)

Constitute a departure from the expected visual appearance of the product.

CODE**NA-01 ILLEGIBLE ETCH/LABEL**

Etch or label partially illegible, or in any way indistinct.

NA-02 DIRTY STARTER

Foreign material on can such as ink or grease spots.

NA-03 POOR ASSEMBLY

Starter base is poorly assembled, but does not separate from can.

NA-04 DEFORMED OR DAMAGED CAN

Metal can does not have its original shape.

NA-05 ELECTRODE OUT

Starter with electrode, from the glowbottle or the capacitor, out of the pin base.

NA-06 DISALIGNED BASE

The base of the starter is not aligned with the ribs of the starter enclosure.

NA-07 BURNED BASE

Starter base exposed to overheat and shows burns.

NA-08 BAD SOLDERING

Starter component has an opaque, not uniform or poor solder joint.

NA-09 STOPPED EARS

The fins of the aluminum jar do not bend to hold the base.

NA-10 LOOSE MATERIAL (TO INNER)

Starter with loose internal component.

NA-11 ENCLOSURE WITH HOLE

Starter enclosure with a hole on the top in a batch of starters without hole.

NA-12 ENCLOSURE WITHOUT HOLE

Starter enclosure without a hole on the top in a batch of starters with hole.

NA-13 OTHER MINORS

Any other minor defect than is not mentioned in this list.

3.2.2 QUANTITATIVE DEFECTS

Are a failure to comply with measurable, quantitative products performance and safety parameters which are numerically defined

3.2.2.1 QUANTITATIVE DEFECTS (CODE QA-..)

See respective Product Technical Specification (code CFAE-..) for parameter values.

3.3 SAMPLING PLAN

Quality assessment is based on inspection of a sample which is drawn at random from an inspection lot (see section 3).

The sample size and acceptability of a lot determined by the use of a double sampling plan in accordance with ANSI/ASQ Z1.4-2003 / IEC Publication 410 associated with the designated inspection levels and AQLs.

3.4 ACCEPTABLE QUALITY LEVEL (AQL)**3.4.1 QUALITATIVE DEFECTS**

DEFECTS CLASS	CODE	INSPECTION LEVEL	AQL
Critical	CA-	II	*
Vital	VA-	II	0.65
Mayor	MA-	II	1.0
Minor	NA-	II	4.0

* One or more defects lead to rejection of the whole inspection lot.

3.4.2 QUANTITATIVE DEFECTS

See respective Product Technical Specification (code CFAE-...) for inspection level and AQL definition.