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trading standards law explained

Packaged goods: average quantity

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In this guide, the words 'must' or 'must not' are used where there is a legal requirement to do (or not do) something. The word 'should' is used where there is established legal guidance or best practice that is likely to help you avoid breaking the law.

Although the United Kingdom left the European Union (EU) in 2021, certain pieces of legislation (known as 'assimilated law') continue to apply until such time as they are replaced by new UK legislation, revoked or permitted to expire. This means that our guidance still contains references to legislation that originated from the EU.

This guidance is for England, Scotland and Wales

The 'average quantity system' is permitted for packaged goods that are sold by weight or volume, and applies to both foodstuffs and non-foodstuffs on offer for sale. The majority of goods packed for consumers are packed to this system.

The Regulations that cover the average quantity system (the Weights and Measures (Packaged Goods) Regulations 2006) control the overall average quantity and the limits of permitted variation of the actual quantity of batches of packaged goods.

They apply to packages that are made up without the customer being present, and are intended for sale in pre-determined constant quantities (by weight or volume) where the packer has determined not to individually weigh or measure each package. They do not apply to 'catchweight' items where the quantities within packages vary (for example, prepacked cheese where the price you pay is dependent on the variable weight of each individual item), even where these packages are made up without the customer being present; nor do they apply to goods sold loose in the presence of the purchaser.

The controls apply both to traders making packaged goods and those importing them.

The effect of these Regulations is to ensure that, 'on average', packaged goods contain the declared weight or volume of goods, which helps to increase customer confidence in the stated quantity, whilst recognising and defining acceptable tolerances to the variations in quantity inherent in packing processes. These small variations are limited by the requirements in the Regulations.

What is a package?

A product plus its container becomes a package when they are combined without the purchaser being present (usually in a manufacturing environment) and the quantity cannot be altered without the container noticeably being opened or changed at the point of sale.

Very small items of less than 5 g or 5 ml, or large items of more than 25 kg or 25 l, are excluded from these Regulations; however, the quantity still needs to be at least that declared. Also excluded are goods sold by length or number. If you are in doubt about the product you are packing or importing, please contact your local Trading Standards Service for specialist advice.

Nominal quantity

'Nominal quantity' is the net quantity that the packer intends to pack to and label on the packaging (for example, '100 g' or '1 litre'), within the limits of variation (plus or minus) described below. The term usually applies to goods that are filled automatically, without the intervention of an operator of the weighing or measuring equipment. However, an operator may be involved in the loading and unloading of the filling machine's container.

The three packers' rules

A batch of packaged goods must, at the time of production, comply with the following three rules:

- Rule 1. The actual contents of the packages must not be less, on average, than the nominal quantity
- Rule 2. The proportion of packages that are below the nominal quantity by a defined amount (the 'tolerable negative error' or TNE) must be less than a specified level, in general no more than 2.5%
- Rule 3. An individual package must not be below the nominal quantity by more than twice the TNE

Tolerable negative error

The following is a table of the tolerable negative error (TNE) values that you must use when complying with the three rules.

TNE values

Nominal quantity (g or ml)	Tolerable negative error
5 to 50	9% of nominal quantity
50 to 100	4.5 g / ml
100 to 200	4.5% of nominal quantity
200 to 300	9 g / ml
300 to 500	3% of nominal quantity
500 to 1,000	15 g / ml
1,000 to 10,000	1.5% of nominal quantity
10,000 to 15,000	150 g / ml
More than 15,000	1% of nominal quantity

Required checks

Packers have a duty to carry out sufficiently rigorous checks to ensure that all three of the packers' rules are met. This means you should establish a system that:

- Is formalised and controls the production process
- Sets up effective sampling and checking plans
- Stipulates an appropriate target quantity
- Controls limits
- Uses and maintains appropriate equipment for checking
- Trains staff
- Keeps appropriate records

You have a duty to ensure that the quantity of product in packages meets the requirements of the three rules, by either:

- Checking statistically-selected samples of packages from the production using suitable equipment, and keeping records of the results
  or
- Measuring the content of each package using suitable equipment

Importers of packaged goods into the UK should refer to the 'Importers and average quantity' section below for an outline of their responsibilities.

Equipment

The equipment used to carry out the checks must be suitable for the use to which it is put. This means that it should have a reasonable degree of sensitivity and accuracy (measuring to 0.2 units of the TNE for the package you are producing) and be suitable for the environment in which it is used.

For example, a 200 g nominal quantity package is permitted a TNE of 9 g; therefore 0.2 x 9 g = 1.8 g. In practice, this would mean an instrument with a scale interval of 1 g would be suitable to either make up the packages or make checks on them.

Equipment must be suitable, calibrated and accurate, and details of any repairs / alterations must be retained. Ask your local Trading Standards Service for advice on specific equipment.

Actual content of packages

The actual content of a package (the net weight or volume) is the total gross weight of the package (package plus contents) minus the weight of the package.

It is common practice when packing liquids to check the actual quantity of the goods in packages by weight (instead of measuring the volume) by calculating the equivalent weight using the following equation: volume = mass divided by density.

Tare weights

The weight of the package without the contents is known as the 'tare weight'. Tare weights may be assumed to be constant if the variation in packaging weight is within acceptable limits, in which case the actual content of the packages is easy to determine by simple subtraction.

However, where the tare weight varies from pack to pack, an allowance must be made for this by establishing the heaviest weight that a package might be and adjusting the target weight of the package accordingly.

If packages cannot be guaranteed to be of a consistent weight, final checks on packages will have to be carried out by 'destructive testing', which involves opening packages in order to determine their actual net quantity by weighing or measuring the contents. In order to avoid destructive testing, you should specify to your packaging material supplier that variability in packaging weight be sufficiently small so that gross weighing and simple subtraction of a standard tare weight can be employed (where this is physically possible).

For more detail and advice on ensuring consistent tare weights, you should contact your local Trading Standards Service.

Quantity control systems

The average requirement rule (packers' rule 1) is most critical when the packing process variability (standard deviation) is always less than 0.5 TNE of the product.

When the process variability exceeds 0.5 TNE, then the target quantity (the amount you set your filling machine to fill each package with) must exceed the declared quantity, in order to comply with the three packers' rules.

If you test fewer than 50 items in a production run, a sampling allowance must be added to the target quantity - that is, increase the fill quantity. A production run is the time taken to produce up to 10,000 packages (within a minimum of one hour and a maximum of one normal day). Different products demand differing levels of checking and testing, depending upon their physical attributes; short runs of less than one hour may require increased sampling.

The guidance notes linked to in 'Further information' below give an example of setting target quantities and action limits.

For more detail and advice, you should contact your local Trading Standards Service.

Keeping records

If you are checking packages by statistical sampling, you must make records of the checks you have carried out. These records must show that you have complied with the three packers' rules. It is recommended that, as a minimum, you should record the product, the batch number, the date, the number of packs in the batch, the number checked and the results of the check. This data can be used to determine sample sizes and frequencies.

A record must also be made of the corrections and adjustments that the checks have shown to be necessary. The records must be kept for 12 months from the time the packages leave your possession or the shelf life of the product, whichever is the earliest.

Goods where every package has the net quantity determined individually (in other words, each package is individually weighed or measured by an operator) are not required to be checked post-filling and therefore there is no requirement to retain the prescribed records. These goods are, because of other weights and measures legislation, required to contain at least the quantity stated, and the minimum net quantity must be determined using prescribed equipment.

Markings

Required markings need to be easily legible and visible under normal conditions of presentation. This means taking into consideration use of colour and contrast. Packages must be marked with the following:

- A statement of the nominal quantity. This statement must be in metric and the size of the marking is prescribed in the Regulations - for example, for a 500 g pack the marking must be at least 4 mm high
- Your name and address. Alternatively you may give the name and address of the business who asked you to make the packaged goods on their behalf

One way to ensure that the visibility requirement for markings is met, in normal conditions of presentation, is to place the markings on the front, or possibly the top, of the container.

If you are packing foodstuffs within the scope of Regulation (EU) No 1169/2011 *on the provision of food information to consumers*, remember that the name of the food and the net quantity (weight or volume) must appear in the same field of vision. See 'Labelling of prepacked foods: product name' for information on the field-of-vision requirements.

In addition, foods that are packed in a liquid medium must be labelled with both the drained net weight and the net weight of the food. If packed in any liquid medium intended to be consumed with the food, rather than disposed of before consuming, this information is voluntary (for example, sauces, fruit juices, consumable oils).

WELMEC 6.8 provides further information on drained-weight products.

You may voluntarily mark the packs with the E-mark, but only on packages of at least 5 g or 5 ml, and not exceeding 10 kg or 10 l. It must be at least 3 mm high, indelible, easily legible and appear in the same field of vision as the statement of quantity. The E-mark indicates that the product has been packed using the average system.



The E-mark acts as a metrological passport for goods sold throughout the EU.

If exporting to the EU, the importer there will be responsible for ensuring that the packs meet the requirements of the average quantity directive (Directive 76/211/EEC *on the approximation of the laws of the Member States relating to the making-up by weight or by volume of certain prepackaged products*). UK producers may get asked to provide the 'necessary guarantees' that the packs are in compliance with the Directive.

WELMEC 6.13 provides guidance on what evidence an EU importer may look for.

Importers and average quantity

If you import goods into the UK, you are responsible for ensuring that the packs comply with the three packers' rules and that they are marked correctly. However, you may obtain and keep suitable documents from the actual packer (before the packages leave your possession) that provide sufficient evidence to show that each batch of the packages comply with the quantity requirements.

The person providing the documentation has to be of a suitable status (for example, an accredited test laboratory or national metrology service) and the information it contains should be validated.

Until 2027, if a pack is imported into the UK from an EU Member State, the contact details of the UK importer do not have to be shown on the label as long as the contact details of the EU packer or importer are present.

Packages containing free-flowing liquids sold in measuring container bottles

Bottles that comply with the Measuring Container Bottles (EEC Requirements) Regulations 1977 have different attributes to other packaging, as they themselves determine the quantity by the fill height of the contents in relation to the top of the bottle. For example, A bottle may contain a litre of liquid once it is filled to the fill height.

The bottles themselves are produced to a specification in the Regulations and are marked to signify this by a symbol, a reversed epsilon* and the fill height being embossed into the bottle near the base. Such bottles can be used by packers to produce products that comply to either the Weights and Measures (Packaged Goods) Regulations 2006 or to minimum quantity requirements.

[*The reversed epsilon can appear in a number of different styles. Some examples are below.]



For packers, this means that the quantity checks can be determined by use of a template (referred across Europe to as a 'templet'). This is a two dimensional measurement gauge, and will either be supplied by the manufacturer of the bottle or made up for the packer from a technical drawing supplied by the manufacturer.

The templet will be marked so the fill height and the tolerable negative error can be seen. The templet is shaped to follow the contours of the bottle.

A templet can be used for average quantity (or for checks carried out on each package). It will have a scale in mm or ml, allowing the packer to conduct checks to prove that a batch of finished packages complies with packers' rules 1 and 2; the packer will mark the packages in accordance with packers' rule 3. See also annex B to the guidance linked to below.

What to expect if you are visited by Trading Standards

If you are visited by a a Trading Standards Officer who is a Weights and Measures Inspector, they may want to know the following information about your packing process:

- The range of products and the physical state of the contents of the package: solid, liquid, semi-liquid, solid in a liquid medium. Do the physical attributes of the contents cause difficulty in packing to an accurate quantity?
- Are the packages made up to a pre-determined constant quantity?
- What are your pack sizes and are they in metric units?
- Do you declare a voluntary supplementary indication of quantity (imperial units)?
- What size is the quantity declaration?
- Do you E-mark your packages? If not, have you decided to pack to the average quantity system?
- How have you determined the target quantity for your packages? Did you include allowances for tare variation, process variation, storage, desiccation, etc?
- Do you check each package or do you take a sample?
- Do you measure the liquid content going into each package manually or do you use a filling machine?
- For solids in a liquid medium, do you declare the net drained weight and the quantity of the whole contents?
- Do you have your name and address on all the packages? Do you identify as a packer, an importer or the person upon whose behalf the packages are made?
- Do you sell direct to the public from your own premises?
- Are the products sold as individual items or are they sold in a fixed number of individual packs within a 'see through' outer sales wrapper?
- What weighing and measuring equipment do you use within the process? Is it properly marked and calibrated?
- Do you use measuring container bottles?

All equipment will be assessed for suitability and may be tested, and the finished products may be evaluated by formal or informal tests on batches of product. Where appropriate this will include the evaluation of tare weights used.

Your checks and records will be examined and assessed to see if the system is rigorous enough and complete.

Any problems with non-compliance against any of the applicable regulations may result in written instructions being issued for you to make corrections to your processes and equipment within a fixed timescale.

Further information

More detailed information can be found in the guidance on the Weights and Measures (Packaged Goods) Regulations 2006, which was produced by the Office for Product Safety and Standards (OPSS).

As well as the specific packaged goods guidance, OPSS has also produced guidance on product marking of measuring container bottles.

Trading Standards

For more information on the work of Trading Standards Services and the possible consequences of not abiding by the law, please see 'Trading Standards: powers, enforcement and penalties'.

In this update

Link added to OPSS guidance on guidance on product marking of measuring container bottles.

Last reviewed / updated: July 2026

Key legislation

- Weights and Measures (Packaged Goods) Regulations 2006
- Assimilated Regulation (EU) No 1169/2011 *on the provision of food information to consumers*
- Non-automatic Weighing Instruments Regulations 2016

Please note

This information is intended for guidance; only the courts can give an authoritative interpretation of the law.

The guide's 'Key legislation' links go to the legislation.gov.uk website. The site usually updates the legislation to include any amendments made to it. However, this is not always the case. Information on all changes made to legislation can be found by following the above links and clicking on the 'More Resources' tab.

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