

UNECE STANDARD FFV-36

concerning the marketing and
commercial quality control of

TOMATOES

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NOTE

Working Party on Agricultural Quality Standards

The commercial quality standards developed by the Working Party on Agricultural Quality Standards of the United Nations Economic Commission for Europe (UNECE) help facilitate international trade, encourage high-quality production, improve profitability and protect consumer interests. UNECE standards are used by governments, producers, traders, importers and exporters, and other international organizations. They cover a wide range of agricultural products, including fresh fruit and vegetables, dry and dried produce, seed potatoes, meat, cut flowers, eggs and egg products.

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The present Standard for Tomatoes is based on document ECE/CTCS/WP.7/2017/23, reviewed and adopted by the Working Party at its seventy-third session.

Aligned with the Standard Layout (2017)

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UNECE Standard FFV-36 concerning the marketing and commercial quality control of Tomatoes

I. Definition of produce

This standard applies to tomatoes of varieties (cultivars) grown from *Solanum lycopersicum* L. to be supplied fresh to the consumer, tomatoes for industrial processing being excluded.

Tomatoes may be classified into the following commercial types:

- “round”;
- “ribbed”;
- “oblong” or “elongated”;
- Cherry/cocktail tomatoes (miniature varieties) of all shapes.

II. Provisions concerning quality

The purpose of the standard is to define the quality requirements for tomatoes after preparation and packaging.

However, if applied at stages following export, products may show in relation to the requirements of the standard:

- a slight lack of freshness and turgidity;
- for products graded in classes other than the “Extra” Class, a slight deterioration due to their development and their tendency to perish.

The holder/seller of products may not display such products or offer them for sale, or deliver or market them in any manner other than in conformity with this standard. The holder/seller shall be responsible for observing such conformity.

A. Minimum requirements

In all classes, subject to the special provisions for each class and the tolerances allowed, the tomatoes must be:

- intact;
- sound, produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- clean, practically free of any visible foreign matter;
- fresh in appearance;
- practically free from pests;
- free from damage caused by pests affecting the flesh;
- free of abnormal external moisture;

- free of any foreign smell and/or taste.

In the case of trusses of tomatoes, the stalks must be fresh, healthy, clean and free from all leaves and any visible foreign matter.

The development and condition of the tomatoes must be such as to enable them:

- to withstand transportation and handling;
- to arrive in satisfactory condition at the place of destination.

B. Maturity requirements

The development and state of maturity of the tomatoes must be such as to enable them to continue their ripening process and to reach a satisfactory degree of ripeness.

C. Classification

Tomatoes are classified in three classes, as defined below:

(i) “Extra” Class

Tomatoes in this class must be of superior quality. They must be firm and characteristic of the variety.

They must be free from greenbacks and other defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

(ii) Class I

Tomatoes in this class must be of good quality. They must be reasonably firm and characteristic of the variety.

They must be free of cracks and visible greenbacks.

The following slight defects, however, may be allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- a slight defect in shape and development;
- slight defects in colouring;
- slight skin defects;
- very slight bruises.

Furthermore, “ribbed” tomatoes may show:

- healed cracks not more than 1 cm long;
- no excessive protuberances;
- small umbilicus, but no suberization;
- suberization of the stigma up to 1 cm²;

- fine blossom scar in elongated form (like a seam), but not longer than two-thirds of the greatest diameter of the fruit.

(iii) Class II

This class includes tomatoes that do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified above.

They must be reasonably firm (but may be slightly less firm than in Class I) and must not show unhealed cracks.

The following defects may be allowed, provided the tomatoes retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape and development;
- defects in colouring;
- skin defects or bruises, provided the fruit is not seriously affected;
- healed cracks not more than 3 cm in length for round, ribbed or oblong tomatoes.

Furthermore, “ribbed” tomatoes may show:

- more pronounced protuberances than allowed under Class I, but without being misshapen;
- an umbilicus;
- suberization of the stigma up to 2 cm²;
- fine blossom scar in elongated form (like a seam).

III. Provisions concerning sizing

Size is determined by the maximum diameter of the equatorial section, by weight or by count.

The following provisions shall not apply to

- trusses of tomatoes;

and are optional for:

- cherry and cocktail tomatoes below 40 mm in diameter;
- ribbed tomatoes of irregular shape; and
- Class II.

To ensure uniformity in size, the range in size between produce in the same package shall not exceed:

- (a) For tomatoes sized by diameter:
- 10 mm, if the diameter of the smallest fruit (as indicated on the package) is under 50 mm;
 - 15 mm, if the diameter of the smallest fruit (as indicated on the package) is 50 mm and over but under 70 mm;
 - 20 mm, if the diameter of the smallest fruit (as indicated on the package) is 70 mm and over but under 100 mm

- there is no limitation of difference in diameter for fruit equal or over 100 mm.

In case size codes are applied, the codes and ranges in the following table have to be respected:

<i>Size code</i>	<i>Diameter (mm)</i>
0	≤ 20
1	$> 20 \leq 25$
2	$> 25 \leq 30$
3	$> 30 \leq 35$
4	$> 35 \leq 40$
5	$> 40 \leq 47$
6	$> 47 \leq 57$
7	$> 57 \leq 67$
8	$> 67 \leq 82$
9	$> 82 \leq 102$
10	> 102

- (b) For tomatoes sized by weight or by count, the difference in size should be consistent with point (a).

IV. Provisions concerning tolerances

At all marketing stages, tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated.

A. Quality tolerances

(i) **“Extra” Class**

A total tolerance of 5 per cent, by number or weight, of tomatoes not satisfying the requirements of the class but meeting those of Class I is allowed. Within this tolerance not more than 0.5 per cent in total may consist of produce satisfying the requirements of Class II quality.

(ii) **Class I**

A total tolerance of 10 per cent, by number or weight, of tomatoes not satisfying the requirements of the class but meeting those of Class II is allowed. Within this tolerance not more than 1 per cent in total may consist of produce satisfying neither the requirements of Class II quality nor the minimum requirements, or of produce affected by decay.

In the case of trusses of tomatoes, 5 percent, by number or weight, of tomatoes detached from the stalk is allowed.

(iii) Class II

A total tolerance of 10 per cent, by number or weight, of tomatoes satisfying neither the requirements of the class nor the minimum requirements is allowed. Within this tolerance not more than 2 per cent in total may consist of produce affected by decay.

In the case of trusses of tomatoes, 10 per cent, by number or weight, of tomatoes detached from the stalk is allowed.

B. Size tolerances

For all classes: a total tolerance of 10 per cent, by number or weight, of tomatoes not satisfying the requirements as regards sizing is allowed.

V. Provisions concerning presentation**A. Uniformity**

The contents of each package must be uniform and contain only tomatoes of the same origin, variety or commercial type, quality and size (if sized).

The ripeness and colouring of tomatoes in “Extra” Class and Class I must be practically uniform. In addition, the length of “oblong” tomatoes must be sufficiently uniform.

However, a mixture of tomatoes of distinctly different varieties, commercial types and/or colours may be packed together in a package, provided they are uniform in quality and, for each variety, commercial type and/or colour concerned, in origin. However, in case of those mixtures uniformity in size is not required.

The visible part of the contents of the package must be representative of the entire contents.

B. Packaging

Tomatoes must be packed in such a way as to protect the produce properly.

The materials used inside the package must be clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly paper or stamps bearing trade specifications, is allowed, provided the printing or labelling has been done with non-toxic ink or glue.

Stickers individually affixed to the produce shall be such that, when removed, they neither leave visible traces of glue nor lead to skin defects. Information lasered on single fruit should not lead to flesh or skin defects.

Packages must be free of all foreign matter.

VI. Provisions concerning marking

Each package¹ must bear the following particulars in letters grouped on the same side, legibly and indelibly marked and visible from the outside:

A. Identification

Packer and/or dispatcher/exporter:

Name and physical address (e.g. street/city/region/postal code and, if different from the country of origin, the country) or a code mark officially recognized by the national authority² if the country applying such a system is listed in the UNECE data base.

B. Nature of produce

- “Tomatoes” or “trusses of tomatoes” and the commercial type, or “cherry/cocktail tomatoes” or “trusses of cherry/cocktail tomatoes” or equivalent denomination for other miniature varieties if the contents are not visible from the outside.
- “Mixture of tomatoes”, or equivalent denomination, in the case of a mixture of distinctly different varieties, commercial types and/or colours of tomatoes. If the produce is not visible from the outside, the varieties, commercial types and/or colours and the quantity of each in the package must be indicated.
- Name of the variety (optional).

C. Origin of produce

- Country of origin³ and, optionally, district where grown, or national, regional or local place name;
- In the case of a mixture of distinctly different varieties, commercial types and/or colours of tomatoes of different origins, the indication of each country of origin shall appear next to the name of the variety, commercial type and/or colour concerned.

D. Commercial specifications

- Class
- Size (if sized) expressed as
 - minimum and maximum diameters; or

¹ These marking provisions do not apply to sales packages presented in packages. However, they do apply to sales packages (pre-packages) presented individually.

² The national legislation of a number of countries requires the explicit declaration of the name and address. However, in the case where a code mark is used, the reference “packer and/or dispatcher (or equivalent abbreviations)” has to be indicated in close connection with the code mark, and the code mark should be preceded by the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.

³ The full or a commonly used name should be indicated.

- minimum and maximum weights; or
- size code as specified in Section III; or
- count followed by the minimum and maximum sizes.

E. Official control mark (optional)

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The OECD Scheme for the Application of International Standards for Fruit and Vegetables has published an explanatory illustrated brochure on the application of this standard. The publication may be obtained from the OECD bookshop at: www.oecdbookshop.org.
