



IFPS – Sustainability of PLU Stickers FAQ's

PLU or Price Look Up codes are an important tool for retailers to identify and charge customers appropriately for produce at the point of sale (POS).

The following are a list of questions concerning the sustainability and safety regarding the stickers that are applied directly to produce:

1. Are PLU labels / stickers food safe?

PLU stickers are, in general, made from three components – adhesive, plastic film or paper, and ink. These three components are required to meet national and local regulations for food safety. Label manufactures are required to comply with these regulations.

Packer/shippers and retailers are encouraged to request food safety certifications from their solutions providers (i.e. label manufacturer, packaging manufacturer, etc.) and ensure that the certification(s) specifically state the regulations that their materials adhere to.

It is also important to request documentation on other relevant certifications such as ISO, GFSI, BRC, etc. that relate to food safety, quality and good manufacturing practices.

2. What happens if the PLU sticker is eaten?

Typically PLU stickers are not meant to be eaten. The food safety regulations cover direct and indirect contact of materials to food products (i.e. fresh produce).

Manufacturers may use third party evaluation to ensure that labels are safe even if accidentally ingested.

3. What standards and regulations do PLU stickers need to meet to be considered food safe?

Label manufactures of PLU stickers are required to meet national and local regulations for food safety. In general, the United States and the European Union have the most stringent regulations and will be reviewed below. Even so, it is important to consider where the labeled produce will be marketed and ensure that the local regulations are being met.

In the US adhesives must meet the FDA regulation 21 CFR 175.125(b), which addresses pressure sensitive adhesives that are allowed to come in **direct contact** with raw fruit and vegetables. In Europe the adhesives must comply with EU Framework Regulation EC No. 1935/2004. This frame work applies to all product that come in contact with food. In addition adhesive must comply with GMP Regulation 2023/2006.



In the US, plastic film and paper materials which form the base of PLU labels must comply with the appropriate FDA regulations - for plastic materials 21 CFR 177 and for paper 21 CFR 176. For Europe these materials must comply with the EU Framework Regulation EC No. 1935/2004, GMP Regulation (EU) 2023/2006 and for plastic material (EU) No. 10/2011 and subsequent amendments.

Currently there are no harmonized regulations for inks. Regardless, PLU label manufacturers must ensure that the products being sold are safe for consumers when used under the intended application use. For Europe, Keller and Heckman LLP (a reputable global law firm with expertise in Food Packaging Law) states that even though printing inks are not subject to the positive list requirements of the Plastic Regulation (EU) 10/2011 that this regulation indirectly sets requirements for specific migration levels for components in printing inks¹.

4. How are PLU stickers sustainable in terms of recyclable, biodegradable and compostable?

It is important to consider the various end of life paths for PLU stickers. Terms like recycling, biodegradable and compostable have been used and considered as all being sustainable options. Therefore the following definitions are offered for each of these terms:

Recyclable – According to the US Federal Trade Commission (FTC) recyclable includes the reuse, reconditioning, and remanufacturing of products or parts in another product. The FTC Green Guidelines also advises marketers to qualify recycling claims when recycling facilities are not available to a substantial majority of consumers, where substantial mean greater than 60%.

Biodegradable – Biodegradable products must return to nature, disintegrating or disappearing completely. A biodegradable product may be broken down by microorganisms, but this does not necessarily imply that the product can be converted into soil-nurturing compost. This disintegration is not bound by time and does not need to enhance quality. Metallic or toxic residue from materials is often released in the return-to-nature process and is still considered part of biodegradation.

Compostable – Compostable products are by definition biodegradable and must break down, or become part of usable, soil-enhancing compost in a safe and timely manner in an appropriate composting facility or home compost pile. Certified compostable products must adhere to the most stringent standard taking into consideration heavy metal content, plant toxicity, disintegration and biodegradation.

¹ Nielsen and O’Keeffe. Keller and Heckman LLP. March 7, 2017. The Regulation of Printing Inks in the European Union. Section II. Overview of the Regulation of Printing Inks in the EU. <https://www.khlaw.com/The-Regulation-of-Printing-Inks-in-the-European-Union>.



Many of the individual components that make up a PLU sticker can be either recyclable and/or compostable. However, as a composite, PLU stickers are difficult to recycle and/or compost. In fact recyclers see pressure sensitive labels as contaminate to the recycling process.

It is encouraged that packer/shippers and retailers request sustainable certifications from their solutions providers (i.e. label manufacturer) and ensure that these certifications specifically state the regulations that their materials adhere to.

5. What standards exist that define compostable and/or biodegradable products?

The following are the most relevant standards for defining compostable products:

- ASTM D6400 (US)
Standard specification for labeling of plastics designed to be aerobically composted in municipal or industrial facilities.
- EN 13432 (EU)
Packaging – requirements for packaging recoverable through composting and biodegradation; test scheme and evaluation criteria for the final acceptance of packaging.
- ISO 17088 (International)
Specification of compostable plastics.

There are currently no accepted testing standards for biodegradable packaging materials in the US, Europe or Internationally.

There are organizations that certify packaging products to the composting standards and are listed below:

- BPI – Biodegradable Products Institute (<https://www.bpiworld.org/>)
- TUV Austria – OK Compost (<http://www.tuv-at.be/home/>)