



## Safety first - printing directly onto foods

Why you should not neglect the aspect of certification in the food sector.

The "EU Regulation No. 852/2004 on the hygiene of foodstuffs" requires that staff working in the food sector and having direct contact with food during meal preparation are certified in food handling.

So, if the employees have to be specially trained, would not it also make sense that the equipment they work with, in this case the edible ink printer, is also certified for use with foods?

### Reasons Why

Many businesses such as bakeries and confectioners, hotels, trade shows, gift shops, event and amusement parks choose to purchase an edible ink printer. And for good reason, as they create added value for their customers by printing on food and thus stand out from the crowd.

The personalisation of products is an important trend. And this offers companies the opportunity to cater even more individually to the wishes and needs of their customers and to retain them in the long term to their product and the company.

If a printer with edible inks is to be used in your company, you should consider some essential safety guidelines before purchasing it.

And for good reason, because the vast majority of edible ink printers on the market are not suitable for food-grade use. Almost all of them are commercial desktop printers that have been modified in one way or another to use edible inks.

The companies who retrofit and sell these converted inkjet printers cannot claim that they are safe or guarantee any cross-contamination has not occurred with the original toxic ink used to prime and test the printer. Additionally, the plastic that makes up the tubing, the printheads, the nozzle plates, etc., come in contact with the edible ink and are not approved for use with food materials.

Not only is the printer itself and all its components not certified, but also the ink cartridges usually do not meet food standards either. None of the leading authorities have inspected these cartridges and no one can guarantee that the ink is actually edible.

As a result, neither you nor your customers have any insight into the ingredients used. But especially with regard to contained allergens, it would be important that you can be transparent to your customers. This is not only required by law (e.g. Natasha's Law in the UK or EU Regulation 1169/2011), but also leads to your customers trusting you and your products.

In addition, many of these cartridges are manufactured to be refillable. This means that leftover edible ink that remains in the bottom of the cartridge is not removed even after refilling and can grow bacteria.

DTM Print, an international OEM and solution provider based in Germany, has recognised this issue for the European market. As a pioneer in specialty printing and with over three decades of experience in developing customised printing services, the company aims to solve the problem by introducing Eddie, the edible ink printer from Primera Technology, Inc.



## Benefits with DTM Print

- **Certification**  
Compliance with food standards is the highest priority. With DTM Print you can be sure that Eddie as well as the trays are certified for the food sector.
- **A Partner for Life**  
By purchasing a printer from DTM Print you will get free lifetime support through local partners.
- **Carefree**  
Customers in Europe will receive 36 months warranty on Eddie after registration on the DTM Print website.
- **Innovation**  
DTM Print is always thinking one step ahead to make everyday life easier for its customers. The trays that allow customers to print food items in many different sizes and shapes is one of those innovations.
- **All-in-One-Solutions**  
DTM Print does not only deliver the hardware. It also supports you with design software. As a customer you can download the following software from the DTM Print website for free:
  - NiceLabel Free 2019 DTM Edition (for Windows User)
  - BarTender UltraLite (for Windows User)
  - SwiftPublisher (for Mac User)
 DTM Print also provides templates for easy creation of print files when using one of the trays. They are available at <https://dtm-print.eu/en/pages/eddie-templates.html>

## Printing directly onto food items with Eddie

Eddie was designed from the beginning to meet or exceed all regulatory requirements for the specific purpose as an edible ink printer.

The edible ink printer has been certified by NSF, a printer industry first. This certification assures owners and customers that the product has been tested and approved by one of the most highly regarded, independent organisations in existence today. The NSF mark is valued by consumers, manufacturers, retailers, and regulatory agencies worldwide.

### Eddie's components

All components and the production plant are certified to avoid contamination with all conceivable foreign substances.

For example, the ink cartridges are constructed with unique, FDA-approved plastics. The foam and nozzle plates inside the ink cartridges have all been selected and extensively tested, and certified, for food-grade use. The manufacturer even went so far as to use FDA-approved adhesives used to bond the nozzle plate to the ink "bottle".

## Eddie's housing

With its stainless steel housing and easy to clean components, Eddie meets all hygienic standards.

Stainless steel is highly durable, and its impermeable surface prevents contamination. Additionally, its smooth surface provides bacteriological neutrality, is designed for easy cleaning, and can handle frequent washing.

When professionals look around their kitchens, there is a reason that their most essential tools, machines, and even tables are made from stainless steel.



## Eddie's printhead and ink cartridge

While other printers with retrofitted systems have fixed printheads and a tube tank system that leads to mould over time, Eddie's printhead and ink compartment are in one cartridge, so bacteria cannot build up in each component during operation. If the ink is depleted, the insertion of a new cartridge takes seconds. With every cartridge change, you use a new printhead and thus literally get a new printer.

The edible ink meets all EU and FDA standards for use as a food additive, while the ink cartridge itself meets cGMP standards and the entire manufacturing and cartridge filling processes are FDA-compliant and cGMP certified. They also comply with the requirements of EU Regulation (EU) No 231/2012 laying down specifications for food additives. In addition, the edible ink is Kosher and Halal certified and suitable for vegans. All this together makes Eddie one of the safest direct-to-food printers.

To be able to print on food it only uses one three-colour ink cartridge that contains the following dyes:

- Cyan: Blue #1 - Brilliant Blue FCF (E133)
- Magenta: Carmoisine - Azorubin (E122)
- Yellow: Yellow #5 - Tartrazin (E102),  
Yellow #6 - Sunset Yellow FCF (E110)

For more information about the ingredients please visit [dtm-print.eu/europe/rohs](http://dtm-print.eu/europe/rohs).



Sealed cartridges are best for one year after the manufacture date. The best by date is printed on the cartridge box. Keep in mind, expiration dates and best-by dates have very different meanings. Expiration dates tell consumers the last day a product is safe to consume. Best by date, on the other hand, tells you that the food is no longer in its perfect shape from that date. It may just lose its freshness, taste, aroma, or nutrients. The best by date is basically a quality indicator. Since this ink is essentially food colouring, it has no nutritional value or taste to contribute to the overall product, so you can be assured that using the ink beyond the best by date is safe as long as the ink is still sealed in its foil packaging.

However, once opened, cartridges last for six months. PrintHub, Eddie's status monitor, will start tracking the six months from the first time they are used in the printer. Once you pass the six-month opened point, the PrintHub software will warn you that your cartridge is expired and should be replaced. If you wish to keep printing over the next few days or even longer, it is OK. The ink does not immediately expire at precisely six months.



## Characteristics

DTM Print trays are made of PLEXIGLAS® XT Colourless 0A000 (20070).

The material of the trays consists of PMMA (polymethyl methacrylate) and the monomers used in production. Due to their smooth surface and the fact that they are dishwasher safe, no bacteria or mould can build.

## Certifications

The material used for the trays meets the requirements

- of the EU Regulation No. 10/2011, whose directives deal with plastic materials and items that come into contact with foods.
- of the XXII - Recommendation for food contact materials in Germany of the Federal Institute for Risk Assessment (BfR) for polymers based on esters of acrylic and methacrylic acids, their copolymers, and mixtures of these with other polymers.
- of the FDA regulations in force in the USA 21 Cfr §177.1010 (Acrylic and modified acrylic plastics, semirigid and rigid).



## Customised food trays from DTM Print

If used with the included carousel feeder, Eddie can print on suitable food items with a maximum diameter of 89 mm and 20-25 mm height. This can be extended to a width of 120 mm and a height of 27 mm by manual feeding. To facilitate this use, DTM Print has developed several food trays specifically designed for Eddie: e.g. one for macarons, one for mints and other button shaped sweets and one with an engraved grid that makes food positioning much easier as users can align their products with the grid.

By using the custom trays production of multiple items in one run (for example up to five macarons or 64 mints) is easy, precise and depending on the item faster, too. DTM Print also offers the service to produce trays according to customer specifications.

*Please note: Our information corresponds to our current knowledge and experience. We reserve the right to make changes in the course of technical progress and further operational development. This information merely describes the conditions of the products and services we are offering and does not constitute a guarantee.*

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