

DETECTAPRO

Metal Detectable Products



Detectapro retractable pens are renowned as being the highest quality choice of pens for use in hygiene critical food processing environments. Every feature of the pen is designed with the food industry in mind, resulting in a truly unique set of properties designed to minimise contamination risks and improve food safety.

The retractable pen line is manufactured using our specialized detectable plastic compound - optimised for metal and x-ray detection in the food and pharmaceutical industries. Our plastic compound also incorporates antibacterial technology, effective against E-Coli, MRSA & Salmonella. All materials used in the construction of our pens feature extensive food contact approvals including EU & FDA compliance.

Our iconic retractable pen design features a spring free mechanism with no detachable parts. All designs feature minimal germs traps and are ergonomically designed making them easy to hold, so less likely to be dropped. The retractable pen series is available with or without a dual detectable clip. The clip is moulded in to the pen. All Detectapro pens feature high quality metal ink cartridges.

Detectapro Pen Range Advantages

- Detectable by in-line metal detection systems & x-ray inspection systems
- Incorporates antibacterial technology to protect against pathogenic germs and moulds
- Available several colors for easy visual identification
- Strong, durable, shatter resistant & chemically resistant material
- Compliant with EU & FDA food contact legislation
- Available in a variety of body styles and ink types to suit specific requirements
- Can be used as part of HACCP and BRC procedures
- Displays due diligence in the prevention of foreign body contamination

Product Description:

Our retractable pens comply to the Global Standard for Food Safety Issue 8 Clause 4.9.6.2 stating: Pens used in open product areas shall be controlled to minimize risk of physical contamination (e.g. designed without small parts and detectable by foreign body detection equipment). NO SMALL PARTS

Housing Material: Detectable Polypropylene Co-Polymer
Cartridge Material: Non Pressurized and Pressurized
Pack Size: 25/Box
Pack Weight: 1 pound
Body Colours: Blue, Red, Green, Black, Orange, Pink, Yellow and White
Ink Colours: Blue, Black, Green, Red
Write Out Length: The total write out lengths of the two cartridges as per ISZ testing are as follows: 9,186 feet m +/- 20%
Ink Specifications: Unpressurised ink, MITI Listed (Japan), ISO 12575 - 2 DOC G2, ISO 12575 - 2 DOC H, ISO 12575 - 2 G2 M, ISO 12575 - 2 DOC A2, ISO 12575 - 1 A M, TSCA Listed (USA), ISO 12757 -1, ISO 12757 - 2

Food Contact Status (EU)

Hereby we declare the detectable polymer in various colours is manufactured in line with the relevant requirements of 2023/2006/EC on good manufacturing practice (GMP) for materials and articles intended to come into contact with food.

The raw materials used in the manufacturing process of the above mentioned materials can be considered suitable for food contact applications in terms of compliance with European regulations. The raw materials used meet the relevant requirements of EU Framework Regulation 1935/2004 on materials and articles intended to come into contact with food.

All monomers, starting substances and additives used to manufacture these grades are listed in Commission Regulation (EU) No. 10 (2011) on plastic materials and articles intended to come into contact with food. The finished articles are required to meet the Overall Migration Limit (OML) of 10 mg/dm(sq) or 60 mg/kg food.

Colourants used are compliant with European Council Resolution AP(89) 1 on the use of colourants in plastic materials coming into contact with food.

Detectapro hereby declare articles manufactured are, according to EU regulations, authorised to come into direct contact with all types of foodstuffs at a maximum temperature of 140°F for a maximum time period of one hour.

Migration Testing

The following overall migration results were obtained using a UKAS accredited laboratory, with overall migration simulants and conditions as detailed in EU Regulation No 10/2011 as amended, on plastic materials and articles intended to come into contact with food.

Food Contact Status (FDA)

The polypropylene base resin meets the FDA (Food and Drug Administration) requirements contained in the Code of Federal Regulations – latest revision (1/4-2011) - in 21 CFR 177.1520 (a) (3) (i) , (b) and (c) (3.1a).

Our base resin grade meets the FDA criteria in 21 CFR 177.1520 for food contact applications, excluding cooking, listed under conditions of use C through H in 21 CFR 176.170 (c), Table 2., and can be used in contact with all food types as listed in 21 CFR 176.170 (c), Table 1. Also the mineral additives and the pigments used are GRAS (Generally Recognized As Safe) or are FDA cleared under specific FDA citations.

Detectapro Metal Detectability

All Detectapro pens are made using an electromagnetically detectable and x-ray visible plastic compound. Within the pen housing is a brass ink cartridge. The metal detectability of this product will vary based on, but not limited to:

- Calibration Levels
- Product Type (E.g. Wet, Dry, Frozen, Liquid)
- Aperture Dimensions
- Orientation

Orientation is a highly influential factor for the metal detectability of a contaminant that is non spherical, i.e. it will be easier to detect the contaminant when passing in one orientation compared to another - this is known as the orientation effect.

During testing we used a worst case scenario which is through the geometric centre of the aperture and in the worst case orientation. For ease of calibration, we have equated the full pen and pen parts to their ferrous ball test piece equivalents, which are widely used for metal detector testing and calibration.

Component	Dimensions	Worst Case Orientation	Test Piece Recommended	Engineer Notes
Full Pen	146 (L) x 12 (Ø) mm	Short Edge Leading	5.00 mm	If the on-site detector is detecting 5.0mm ferrous or smaller then it will detect the pen regardless of orientation
Pen Housing	146 (L) x 12 (Ø) mm	Short Edge Leading	2.0 mm	If the on-site detector is detecting 2.0mm ferrous or smaller then it will detect the pen housing regardless of orientation
Pen Clip	17 x 6 x 2 mm	Short Edge Leading	1.0 mm	If the on-site detector is detecting 1.0mm ferrous or smaller then it will detect the pen clip regardless of orientation

The above table is based on our own testing using one type of metal detector, and is supplied purely for customer convenience. Different metal detectors will feature different sensitivity settings, as well as settings for different product types (E.g. Wet, Dry, Frozen, Liquid).

For this reason Detectapro recommends all our products be thoroughly tested on your metal detection systems by a trained and certified professional. It may be the case your equipment needs to be recalibrated in order to reliably detect this product. Such a professional should be available by contacting the manufacturer of your metal detection system.

X-Ray Visibility

In contrast to metal detection, x-ray visibility is determined by material density. For this reason, our polymer contains an additional, evenly dispersed, food safe, high density additive.

Based on our experience and testing, positive readings should be consistent both for whole pens and fragments as small as 5mm. X-ray detection performance will be reduced when small fragments are buried in deeper, denser products - detection will depend on product type and density.

We highly recommend all our products be thoroughly tested on your x-ray inspection systems by a trained and certified professional. It may be the case that your equipment needs to be recalibrated in order to reliably detect this product. Such a professional should be available by contacting the manufacturer of your x-ray inspection system.

Note: Detectapro products are supplied in good faith, and manufacturer's data is accurate and up to date. In accordance to manufacturer's data all refills fitted to Detectapro pens adhere to the relevant legislation stated. Detectapro can accept no responsibility for manufacturers altering their procedures or production methodology without notifying Detectapro in advance of any changes.



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