

## Detectapro Retractable Detectable Permanent Marker | MRPEN

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### Product Description

The Detectapro Retractable Detectable Permanent Marker (MRPEN) features metal detectable and x-ray visible external and internal plastic components made from a specially formulated XDETECT Polypropylene compound. Our retractable markers boast all the same properties as other pens in the Detectapro range, including FDA, EU, and Japanese food contact approvals. They are shatter resistant, lanyard compatible, have color co-ordinated retractable push inserts, sureflow ink and they are Made in Britain.

The alcohol-based ink will permanently mark most surfaces, including wood, plastic, glass concrete and clean or printed metals.

### Advantages

- Detectable by conventional metal and x-ray detection systems
- FDA, EU and Japanese Food Contact Approved
- Permanently marks most surfaces including wood, plastic, glass, concrete and metal
- Shatter resistant, lanyard compatible and feature Sureflow
- Highly visible bright blue body color for easy visual identification
- Displays "All Due Diligence" in the prevention of foreign body contamination

## Product and Packaging Information

Item Number:	MRPEN
Size:	5.75" x .71"
Ink:	BL, BK, GN, RD
Write Out Length:	2953' +/- 20%
Body Colors:	Blue
Pack Size:	10
Pack Weight:	10.6 oz
Detectability:	Metal and X-Ray Visible

## Ink Specification

ASTM D-4236 TRA

## Safety Certificates / Approvals

FDA Approved	EU Compliant	Kosher Certified	Halal Approved
BRC Compliant	ISO 9001:2015	Made in Britain	

## Handling and Storage

Store at normal room temperature, keep away from direct heat and keep in original container.

## Ink Properties

This ink does not contain any substances of very high concern (SVHC), Benzene, Toluene or Xylene.

Property	Value
Hazard Identification	With normal use, no known hazards
Stability / Reactivity	Product is stable
Eco Toxicity	Harmful to aquatic organisms and to the aquatic environment in general.
Regulatory Information	R11: Highly Flammable. R22 Harmful if swallowed. R52/53: Harmful to aquatic organisms, may cause long-term effects in the aquatic environment. S25: Avoid contact with eyes. S:26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

## Ink Safety

Ink contact with skin is not considered hazardous when coming into contact with skin through normal use. In the event of abnormal use causing health problems please refer to the below information.

Route	First Aid
Oral	Give plenty of water to drink if ingestion is suspected
Skin Contact	Wash skin with soap and water
Eye Contact	Irrigate with water for ten minutes—obtain medical attention
Inhalation	Remove from exposure—in severe cases obtain medical attention

## Ink Temp Range

The permanent ink will work in temperature ranges up to 50°C. They will also work in freezing temperatures however, if used for longer periods of time at freezing temperatures the nib will solidify due to the surfactant additive that is used to stop the ink from drying out.

## Food Contact Status (EU)

Hereby we declare that the material XDETECT in various colors 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 (XDETECT in various colors) 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. Applicable restrictions on monomers, additives etc. (SML, QM) are available on request. The finished articles are required to meet the Overall Migration Limit (OML) of 10 mg/dm<sup>2</sup> or 60 mg/kg food.

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

XDETECT (various colors) is compliant with Directive 1895/2005/EC on the restriction of use of certain epoxy derivatives (BADGE, BFDGE, NOGE), since the latter substances are not intentionally used in the manufacturing process of XDETECT. BST Detectable Products (sold by Detectapro) hereby declare that articles manufactured from BST XDETECT are, according to EU regulations, authorized to come into direct contact with all types of foodstuffs at a maximum temperature of 40°C for a maximum time period of one hour.

## Migration Testing

The following overall migration results for XDETECT 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.

Sample: PP-C-2013/393

Test conditions: Simulants A, B and 95%v/v ethanol: 10 days at 40°C. Iso-octane: 2 days at 20°C

Method	EN-1186-3 Migration into 10% v/v Ethanol (Simulant A)	EN-1186-3 Migration into 3% w/v Acetic Acid (Simulant B)	EN-1186-14§ Migration into Iso-octane (Substitute test)	EN-1186-14§ Migration into 95% Ethanol (Substitute test)
Replicate #1	0.2 mg/dm <sup>2</sup>	0.5 mg/dm <sup>2</sup>	19.4 mg/dm <sup>2</sup>	0.8 mg/dm <sup>2</sup>
Replicate #2	0.3 mg/dm <sup>2</sup>	0.5 mg/dm <sup>2</sup>	21.0 mg/dm <sup>2</sup>	0.9 mg/dm <sup>2</sup>
Replicate #3	0.0 mg/dm <sup>2</sup>	0.3 mg/dm <sup>2</sup>	20.8 mg/dm <sup>2</sup>	0.6 mg/dm <sup>2</sup>
Mean Result	0.2 mg/dm <sup>2</sup>	0.4 mg/dm <sup>2</sup>	20.4 mg/dm <sup>2</sup>	0.8 mg/dm <sup>2</sup>
EU Limit	10.0 mg/dm <sup>2</sup>	10.0 mg/dm <sup>2</sup>	#20.0 mg/dm <sup>2</sup>	10.0 mg/dm <sup>2</sup>
Tolerance			#6.0 mg/dm <sup>2</sup>	

### #Limit and tolerance are quoted after the application of a fatty food reduction factor of 2 as quoted in EU Regulation 10/2011

To summarize the overall migration test results, the PP-C-2013/393 complies with the overall migration requirements given in EU Regulation 10/2011, as amended, with regards to use with all non-fatty foods, aqueous foods and fatty foods that require a reduction factor of 2 (or greater), as given in EU regulation 10/2011, as amended.

## Food Contact Status (FDA)

The polypropylene base resin used in XDETECT 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).

At the same time this 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.

## Metal Detectability

Detectapro Retractable Markers (MRPEN) are made using XDETECT, an electromagnetically detectable and x-ray visible plastic compound. 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.

For this reason Detectapro recommend that all our products be thoroughly tested on your metal detection 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 metal detection system.

## X-Ray Visibility

In contrast to metal detection, x-ray visibility is determined by material density. For this reason, XDETECT 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 XDETECT 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 that 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.

## ISO Standards

Detectapro Detectable Products are certified in accordance with ISO 9001-2015

The information provided in this product specification sheet is based on our experience and knowledge to date and we believe it to be true and reliable. This information is intended as a guide for your use of our products, the use of which is entirely at your own discretion and risk. We, Detectapro and BS Teasdale & Son Ltd., cannot guarantee favorable results and assume no liability in connection with the use of our products. © 2020 BS Teasdale & Son Ltd. All Content and Data are owned by BS Teasdale & Son Ltd and are protected by international copyright law.