

BST DETECTABLE ID BADGE HOLDER

METAL DETECTABLE | FOOD SAFE | SECURE | SMART | DURABLE

Product Specifications

TE1BMS8654MB1 | Revised September 2018



Product Description: This fully metal detectable badge holder provides a safe way of displaying your ID cards, perfect for displaying visitor passes or security cards. They feature fixing holes for optional lanyards or clips that allow it to be used in a landscape or portrait format. The holder will securely hold a standard sized ID card, with the same dimensions of a UK Driving Licence (86mm x 54mm).

The holder is manufactured using food grade durable nylon plastic, with interlaced AISI 302 grade stainless steel fibres to give the badge its metal detectable properties. Metal detectable plastic products are designed to prevent plastics contaminating food and their use displays due diligence in preventing foreign body contamination.

Product Material: BST XDETECT [*Polypropylene Co-Polymer*]

Product Prefix: TE1BMS8654MB1

Product Colour: Blue

Pack Size: 10 Badges

Pack Weight: 0.15kg

Product Advantages:

- ✓ Detectable by in-line metal detection systems
- ✓ Bright blue colour for easy visual identification
- ✓ Strong, durable, smart and convenient
- ✓ Food grade material suitable for food contact applications
- ✓ Can be used as part of HACCP and BRC procedures
- ✓ Displays due diligence in the prevention of foreign body contamination



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XDETECT Physical Properties:

<u>Property</u>	<u>Value</u>	<u>Test Methods</u>
Specific gravity	1.10 g/cm ³	ISO 11183
Water absorption (at saturation, 23°)	0.02 %	ISO 62
Humidity absorption (23°/50% r.h.)	0.01 %	ISO 62

XDETECT Mechanical Properties:

<u>Property</u>	<u>Value</u>	<u>Test Methods</u>
Tensile strength (Max)	30 MPa	ISO 527
Elongation at break	>30 %	ISO 527
Flexural strength	35 MPa	ISO 178
Flexural modulus	1.5 GPa	ISO 178
IZOD impact strength, notched	10 kJ/m ²	ISO 180 / 1eA
IZOD impact strength, unnotched	40 kJ/m ²	ISO 180 / 1eU

Food Contact Status (EU)

Hereby we declare that the material XDETECT 2.0 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 (XDETECT 2.0 in various colours) 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(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.

XDETECT 2.0 (various colours) 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 2.

BST Detectable Products hereby declare that articles manufactured from BST XDETECT are, according to EU regulations, authorised 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.



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Migration Testing

The following overall migration results for XDETECT 2.0 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 ²	0.5 mg/dm ²	19.4 mg/dm ²	0.8 mg/dm ²
Replicate #2	0.3 mg/dm ²	0.5 mg/dm ²	21.0 mg/dm ²	0.9 mg/dm ²
Replicate #3	0.0 mg/dm ²	0.3 mg/dm ²	20.8 mg/dm ²	0.6 mg/dm ²
Mean Result	0.2 mg/dm²	0.4 mg/dm²	20.4 mg/dm²	0.8 mg/dm²
EU Limit	10.0 mg/dm²	10.0 mg/dm²	#20.0 mg/dm²	10.0 mg/dm²
Tolerance			#6.0 mg/dm²	

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

To summarise 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.

Statement of EU Food Contact Compliance

BST Detectable Products hereby declare that articles manufactured from BST XDETECT are, according to EU regulations, authorised 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.

Statement of USA Food Contact Compliance

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 (FOR GUIDANCE ONLY)

BST XDETECT is an electromagnetically detectable and x-ray visible plastic compound. The metal detectability of this compound will vary based on, but not limited to the following factors:

- Detector Calibration Levels
- Food Product Type / Effect (E.g. Wet, Dry, Frozen, Liquid)
- Detector Aperture Dimensions
- Contaminant Orientation



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For this reason BST 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. XDETECT samples gave following test piece equivalent readings when tested through the geometric centre of an Anritsu KD8124AW coaxial metal detection system with a 95 x 450 mm aperture:

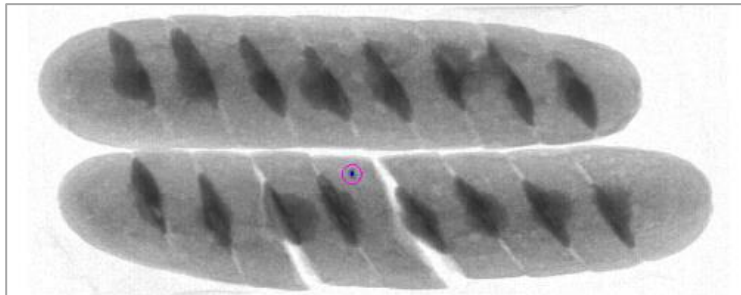
XDETECT Contaminant Size	Advised Minimum Ferrous Sensitivity for Detection
4.0 mm ³ Cube	2.0 mm FE
6.0 mm ³ Cube	2.5 mm FE
7.0 mm Ø Sphere	2.5 mm FE
8.0 mm ³ Cube	3.5 mm FE
11.0 mm Ø Sphere	4.0 mm FE

Although designed to be detected as a ferrous contaminant, XDETECT will also trigger smaller readings as a non-ferrous and stainless steel contaminant. Please note that the above information is for guidance only, and performance will vary.

X-Ray Visibility (FOR GUIDANCE ONLY)

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 for XDETECT fragments as small as 5mm³. X-ray detection performance will be reduced when small fragments are buried in deeper, denser products. **Detection will depend on product type and density.** This screenshot shows a 5mm³ XDETECT fragment through a popular x-ray inspection system, inside a packaged garlic bread product.



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.

DISCLAIMER

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, BS Teasdale & Son Ltd, cannot guarantee favourable results and assume no liability in connection with the use of our products. © 2014 BS Teasdale & Son Ltd. All Content, Data & Images are owned by BS Teasdale & Son Ltd and are protected by international copyright law.



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