

Product Specifications

| Revised March 2016



Key Features:

- ✓ Metal Detectable
- ✓ X-Ray Visible
- ✓ Snap Resistant
- ✓ Adjustable
- ✓ High Strength
- ✓ Available in 6 colours
- ✓ FDA Approved
- ✓ EU 10/2011 Compliant
- ✓ Made in Britain

Colour Availability: Blue, Green, Red, Black, Yellow, Orange

Order Code: 8900647

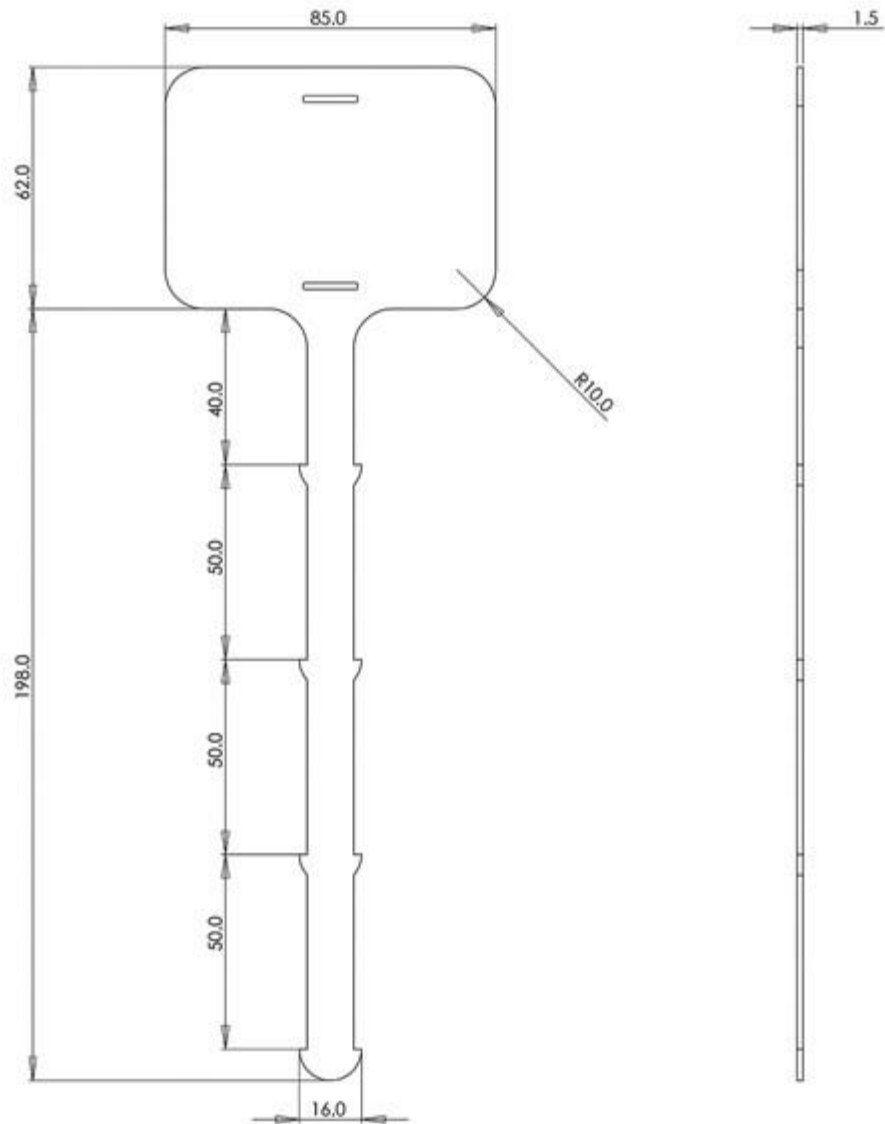
The Tie ID Tag has been specifically developed for use in the food industry to address concerns of contamination from plastic tags.

These tags are suitable for a variety of applications including the tagging of machinery and other assets. As well as being metal detectable an x-ray visible, these tags are also highly shatter and snap resistant, making them less likely to cause contamination.

Available in a variety of six colours, these handy detectable plastic ID tags can also integrate into your factory colour scheme, assisting with your HACCP process and BRC compliance. These tags are ideal to be used with our detectable permanent markers.



Technical Drawing:



Food Contact Status

Hereby we declare that the material XDETECT 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 as amended up to 202/2014/EC 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 (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.

The following overall migration results for XDETECT sample plaques were obtained using a UKAS accredited laboratory, with the full report available upon request.

Overall migration according to EU Commission Regulation (EU) No. 10 (2011) on plastic materials and articles intended to come into contact with food:

Method	Simulant A (10% v/v Ethanol) (2 Hours @ 70°C)	Simulant B (3% w/v Acetic Acid) (2 Hours @ 70°C)	Simulant C (Olive Oil) (2 Hours @ 70°C)
Replicate #1	0.5 mg/dm ²	0.1 mg/dm ²	2.6 mg/dm ²
Replicate #2	0.7 mg/dm ²	0.0 mg/dm ²	2.9 mg/dm ²
Replicate #3	0.8 mg/dm ²	0.2 mg/dm ²	3.3 mg/dm ²
Replicate #4	-	-	2.7 mg/dm ²
Mean Result	0.7 mg/dm²	0.1 mg/dm²	2.9 mg/dm²
EU Limit	10.0 mg/dm²	10.0 mg/dm²	10.0 mg/dm²
EU Compliance	COMPLIANT	COMPLIANT	COMPLIANT

Specific Migrations according to EU Commission Regulation (EU) No. 10 (2011) on plastic materials and articles intended to come into contact with food:

Substance	Test Simulant	Test Temperature	Time	EU Limit	Result	EU Compliance
Barium	3% Acetic Acid	40°C	1 Hour	1000 µg/kg	146 µg/kg	COMPLIANT
Bis(2-ethylhexyl)phthalate DEHP	Olive Oil	40°C	1 Hour	1500 µg/kg	-	COMPLIANT
Bis(n-butyl)phthalate DBP	Olive Oil	40°C	1 Hour	300 µg/kg	-	COMPLIANT

Statement of EU Food Contact Compliance

The Detectable Products hereby declare that articles manufactured from 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)

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

For this reason Niebling 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

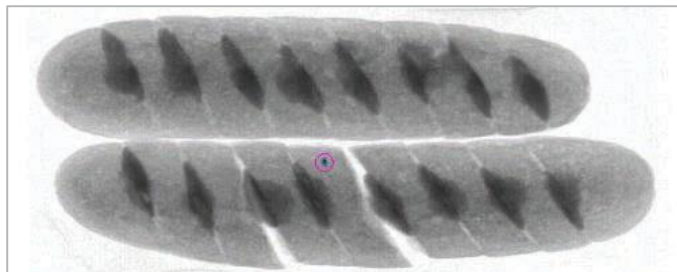


Although designed to be detected as a ferrous contaminant, XDETECT will also trigger smaller readings as a non-ferrous and stainless steel contaminant. Please note that the above information is for guidance only, and performance will vary.

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, Niebling Technische Bürsten GmbH, cannot guarantee favourable results and assume no liability in connection with the use of our products.