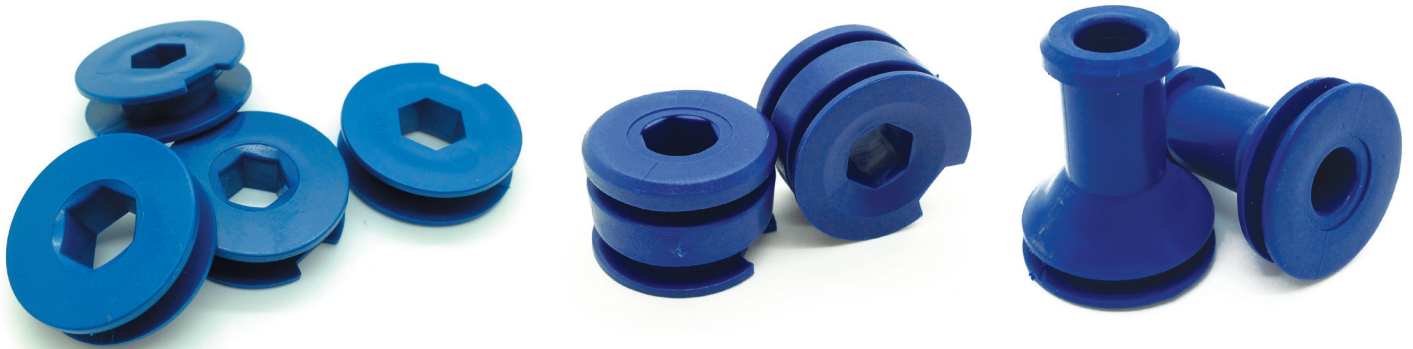


BST Detectable Retainer Clips | CU5R*



The BST Detectable Retainer Clips

Our food grade detectable retaining clips are designed to securely fit our range of detectable suction cups onto bakery depanner belts. Our retaining clips are designed to fit securely to a 3ply PVC finished 5mm thick belt, typically used in the depanning of bread loaves and buns.

Our standard clips are available with round holes (for push-fit into the belt) or hexagonal holes (for easy twist fit into the belt using an insertion tool). Double decker clips allow extra reach from the belt and also easier removal of the cup for cleaning / replacement.

We also offer long neck clips, designed specifically for our long neck suction cups. Standard and double decker clips are available with different bore hole sizes to allow for increased / decreased airflow as needed.

The heat and speed of the depanning process results in the inevitable wear of components including suction cups and retaining clips - should a component fail and become detached, it is essential that this component is detected and results in the contaminated product being rejected from the production line.

BST Detectable Retainer Clip Advantages

- ✓ Detectable by both metal detection and x-ray inspection systems
- ✓ Incorporates antibacterial technology to protect against pathogenic germs & moulds
- ✓ Highly visible blue or terracotta colours for easy visual identification
- ✓ Shatter Resistant Polymer means near impossible to break
- ✓ FDA Approved & EU Compliant for direct food contact
- ✓ Halal approved and Kosher certified
- ✓ Available in a variety of styles to suit different applications
- ✓ Can be used as part of HACCP and BRC procedures
- ✓ Displays due diligence in the prevention of foreign body contamination

| Image | Product Size & Description | Product Code | Fits Cups |
|---|--|--|---------------------------|
|  | 6.6mm Single Round 8.0mm Single Round 9.0mm Single Round 9.5mm Single Round | CU5RSR66DB CU5RSR80DB CU5RSR90DB CU5RSR95DB | 40mm & 36mm standard cups |
|  | 8.0mm Single Hex 9.0mm Single Hex | CU5RSX80DB CU5RSX90DB | 40mm & 36mm standard cups |
|  | 8.0mm Double Decker Hex 9.0mm Double Decker Hex | CU5RDX80DB CU5RDX90DB | 40mm & 36mm standard cups |
|  | 8.0mm Long Neck Round | CU5RLR80DB | Only 40mm long neck cups |
|  | Blank - No Bore | CU5RSB00DB | 40mm & 36mm standard cups |

Product and Packaging Information

| | | | |
|----------------------|--------|-----------------------|-----------------------|
| Pack Size | 100 | Material | BST XDETECT® |
| Pack Weight | 0.01kg | Detectability | Metal & X-Ray Visible |
| AntiBacterial | Yes | Commodity Code | 39174000 |

Safety Certificates / Approvals

| | | | |
|--------------|------------------|-------------------------|-----------------|
| FDA Approved | Kosher Certified | Incorporate SteriTouch® | ISO 9001:2015 |
| EU Compliant | Halal Approved | BRC Compliant | Made In Britain |



Food Contact Status (EU)

We hereby 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 (XDETECT® 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® (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®.

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.

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.

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 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/dm ² | 0.4 mg/dm ² | 20.4 mg/dm ² | 0.8 mg/dm ² |
| EU Limit | 10.0 mg/dm ² | 10.0 mg/dm ² | #20.0 mg/dm ² | 10.0 mg/dm ² |
| Tolerance | | | #6.0 mg/dm ² | |

#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.

Antibacterial Technology

These products are manufactured from XDETECT® with built in silver ion antimicrobial technology, supplied by our partners SteriTouch. This technology offers continuous protection against cross infection, reducing the risk of spreading pathogenic germs such as MRSA, E.Coli and Salmonella. The antibacterial surface protection harnesses the natural sterilising properties of silver; this protection is permanently embedded into the XDETECT® compound and will not wear off over time.

These antibacterial properties have been laboratory tested and proven to be effective against harmful bacteria and mould including but not limited to:

Bacterium

Bacillus Cereus
Bacillus Subtilis
Campylobacter
Klebsiella Pneumonia
Pseudomonas Aeruginosa
Streptococcus Mutavs
Streptococcus Pyogenes
Vibri Parahaemolyticus
MRSA
E.Coli
Salmonella

Fungus

Aspergillus Niger
Aureobasidium Pullulans
Candida Albicans
Cladosporium Cladosporioides
Fusarium Solani
Penicillium Funiculosum

Antibacterial Technology Continued

The antibacterial additive used in XDETECT® complies with the relevant requirements of Regulation 1935/2004/EC (Framework Regulation), applicable to intermediate materials (e.g. plastic powders, plastic granules or plastic flakes) and also with the relevant requirements of Regulation 10/2011/EC (PIM), applicable to intermediate materials (e.g. plastic powders, plastic granules or plastic flakes).

The monomers and additives used to produce the antibacterial additive are listed in the Union List of Authorized Substances of Regulation 10/2011/EC. Dual use additives subject to restrictions in food as defined in Regulation 10/2011/EC are not intentionally used in the manufacture of or formulation of this product.

Antibacterial Laboratory Testing Method

All testing is conducted by an independent laboratory using the JIS Z 2801:2000 test method. Where possible, all test materials are taken from samples of the actual product. Samples typically measure 50mm x 50mm as specified by the JIS Z 2801:2000 method, although where this is impractical it is permissible to use smaller samples with the method being modified accordingly.

Each test sample is inoculated with a suspension of the test organism (for example MRSA). The inoculum is held in contact with the test sample using a sterile polyethylene film. All test samples are inoculated in triplicate, with an additional three replicates of the control.

The bacterial population on three control replicates is evaluated immediately following inoculation. This is assumed to be the initial population on all test samples. The remaining samples are incubated for the test period (typically 24 hours) at 35°C, at which time the bacterial population is evaluated.

Antibacterial Laboratory Testing Results

Salmonella Results Table

| Sample Material | Bacterium | CFU at 0 Hours | CFU at 24 Hours | Comparison |
|-----------------|-------------------------|----------------|-----------------|-------------------|
| Control | Salmonella. enteritidis | 150000 | 140000 | N/A |
| BST XDETECT® | Salmonella. enteritidis | 150000 | <10 | 99.999% reduction |

MRSA Results Table

| Sample Material | Bacterium | CFU at 0 Hours | CFU at 24 Hours | Comparison |
|-----------------|-----------|----------------|-----------------|-------------------|
| Control | MRSA | 100000 | 470000 | N/A |
| BST XDETECT® A | MRSA | 100000 | <10 | 99.998% reduction |
| BST XDETECT® B | MRSA | 110000 | <10 | 99.998% reduction |
| BST XDETECT® C | MRSA | 110000 | <10 | 99.998% reduction |

E.Coli Results Table

| Sample Material | Bacterium | CFU at 0 Hours | CFU at 24 Hours | Comparison |
|-----------------|-----------|----------------|-----------------|-------------------|
| Control | E. Coli | 140000 | 11000000 | N/A |
| BST XDETECT® A | E. Coli | 140000 | <10 | 99.999% reduction |
| BST XDETECT® B | E. Coli | 140000 | <10 | 99.999% reduction |
| BST XDETECT® C | E. Coli | 140000 | <10 | 99.999% reduction |

Metal Detectability

BST retainer clips are made using XDETECT®, an electromagnetically detectable and x-ray visible plastic compound. Metal detectability performance will vary based on, but not limited to the following factors:

- 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 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 re-calibrated 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. 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.

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. © 2020 BS Teasdale & Son Ltd. All Content, Data & Images are owned by BS Teasdale & Son Ltd and are protected by international copyright law. SteriTouch® is a registered trademark of Radical Materials Ltd

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