

## BST Metal Detectable Cable Ties | CT3C\*

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### BST Cable Ties

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BST Metal detectable cable ties feature a food safe metal additive, dispersed evenly and completely throughout the entire polyamide 6.6 body of the cable tie. These cable ties have an operating temperature of -25°C to 65°C, and can be used as part of a HACCP process or BRC procedures. These BST cable ties come in a standard colour of blue, making them visually detectable, further reducing

food contamination risks. These cable ties have been specifically manufactured for the food and pharmaceutical processing industries. Even small pieces of these ties can be detected by correctly calibrated and tested in line metal detection systems. BST metal detectable cable ties are ideally suited for the installation of cabling in and around production areas.

### BST Cable Tie Advantages

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- ✓ Detectable by in-line metal detection systems
- ✓ Bright blue colour for easy visual identification
- ✓ Available in various sizes to suit a variety of applications
- ✓ Strong, durable & highly resistant to corrosion
- ✓ RoHS compliant and Halogen free
- ✓ Floats in different liquids
- ✓ Can be used as part of HACCP and BRC procedures
- ✓ Displays due diligence in the prevention of foreign body contamination

## Product and Packaging Information

CT3C10025MB	<b>Dimensions</b>	2.5 x 100mm	<b>Pack Weight</b>	0.03kg	<b>Tensile Strength</b>	10kg
CT3C15036MB	<b>Dimensions</b>	3.6 x 150mm	<b>Pack Weight</b>	0.06kg	<b>Tensile Strength</b>	18kg
CT3C20046MB	<b>Dimensions</b>	4.6 x 200mm	<b>Pack Weight</b>	0.13kg	<b>Tensile Strength</b>	25kg
CT3C28546MB	<b>Dimensions</b>	4.6 x 285mm	<b>Pack Weight</b>	0.17kg	<b>Tensile Strength</b>	25kg
CT3C38546MB	<b>Dimensions</b>	4.6 x 385mm	<b>Pack Weight</b>	0.28kg	<b>Tensile Strength</b>	25kg
CT3C36075MB	<b>Dimensions</b>	7.6 x 360mm	<b>Pack Weight</b>	0.31kg	<b>Tensile Strength</b>	60kg

<b>Colour</b>	Blue	<b>Detectability</b>	Metal Detectable
<b>Temperature Range</b>	- 25 + 65 °C	<b>Material</b>	Polyamide 6.6
<b>Pack Size</b>	100	<b>Commodity Code</b>	39269097

## Safety Certificates / Approvals

BRC Compliant ISO      ISO 9001:2015



## Guidance advice for the storage and usage of PA66 cable ties

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Most cable ties are manufactured using Polyamide (PA66) material. This material has many beneficial properties and, with the addition of various additives, the properties of products manufactured with it can be adapted to suit a wide variety of applications.

PA66 material is hygroscopic – depending upon the environment that it is subjected to it will absorb moisture from or release moisture to the atmosphere. The mechanical properties of this material are significantly affected by the amount of moisture it contains – particularly flexibility and tensile strength. Moisture acts as a plasticizer in this material – effectively making it tougher and more pliable.

In order to successfully mould with PA66 it must first be dried. Consequently, immediately after moulding, cable ties are dry and tend to be brittle. They are then packed in sealed plastic bags together with controlled amounts of water. The cable ties absorb the moisture over a period of time this process is known as conditioning, and once conditioned they are tough and pliable. The time taken for cable ties to fully condition depends upon the surrounding temperature (the lower the temperature, the longer the conditioning time) and whether or not the cable ties also contain additives such as colourants, UV inhibitors, impact modifiers and flame retardants – such additives will either lengthen or shorten the conditioning time. As an example, the flame retardants used in V0 cable ties will cause significant acceleration in the moisture absorption and moisture release rates and consequently the storage and installation conditions of V0 cable ties should be carefully monitored and controlled.

Once the cable ties are removed from the plastic bags they will quickly be affected by the surrounding atmosphere. If the atmosphere is dry (low relative humidity) they will release moisture to the atmosphere, becoming dryer and less pliable / more brittle. The rate at which moisture is lost in a dry atmosphere is accelerated if the temperature is hot (above 25 degrees centigrade) or cold (below 10 degrees centigrade).

It is important to note that the plastic bags in which the cable ties are packed will delay the release of moisture, but they are not vapour barriers and will not prevent the loss of moisture in the longer term. If cable ties are stored in very dry conditions they will release moisture even when they are kept in sealed plastic bags.

Dry cable ties will have a tendency to be brittle during installation – this is the time at which they undergo the most extreme stresses. Once they have been applied changes in their mechanical properties resulting from changes in moisture content are not of negative influence to the application of the cable ties.

## Metal Detectability

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Metal detectable cable ties contain an evenly dispersed metal additive. Subject to correct calibration of metal detection / x-ray inspection systems, this product should be fully metal detectable and x-ray visible. 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.

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. © 2022 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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