

Unique tamper-evident seals with NFC and printed code

A unique identifier on individual packages is essential for unique product identification – the basis for individual customer communication, track and trace, and data analysis. To achieve a very high level of security, SECURIKETT offers labels with printed QR code and NFC chips that are linked. This information can be easily accessed with a QR code-reader or a smartphone's NFC function.

Brand-owners unfortunately see their products vulnerable to counterfeiting, imitation, parallel trade and other forms of product fraud. These malpractices lead to an erosion of the brand and its image. When counterfeits of a brand become publicised, consumers prefer to turn to other products. Sales and brand equity, which takes years to build, can be quickly lost.

A security label can be helpful against many types of fraud. Collection and refilling of empty bottles are a widespread problem, which can occur in any region of the world. Bought from a central source, a security label can also be used to gain control over quantities produced; for example, to counteract the '4th shift' phenomenon. This occurs when an undeclared extra shift produces and sells branded products without paying the brand-owner a sales margin or licence fee.

A security label also serves as a secure basis for product identification via coding. A unique code (UID) can be applied to each individual package. New technologies such as near field communication (NFC) may be integrated to facilitate authentication of the product and interaction with the consumer.

However, every authentication technology has to rely on an effective tamper protection to avoid being transferred to a fake product. SECURIKETT is a leader in the field of tamper evidence with innovative proprietary technologies such as VOID labels. The VOID effect makes an initially invisible symbol or text appear on the packaging and seal once it is removed. This effect is clearly visible and irreversible. These tamper-evident labels help to guarantee packaging integrity.

Digital product security

Product protection is no longer physical but has advanced to include digital verification. Interactive

verification systems that can easily be accessed by the customer's smartphone provide access to data from the cloud, which links individual product units to the internet. Brand-owners are able to communicate directly with customers to increase loyalty and trust in their brand, and receive direct feedback from consumers. Consumers can also verify product authenticity prior to use.

A unique CODIKETT code for each product allows product identification down to the unit level. With a printed QR code or NFC chip, the authenticity of the product can be verified within seconds. This UID not only increases security but also enables various end-customer activities, such as competitions or bonus programmes. The database content called up by the user can be modified in the cloud at any time, even after the products have been placed on the market.

CODIKETT, the digital product-protection solution from SECURIKETT, registers every product scan that is conducted. The CODIKETT system provides a history for each individual product unit that enters the distribution channel. The track-and-trace data collected throughout the entire supply chain brings visibility to the actual distribution channels. With the concept of 'one code fits all', CODIKETT copes with a variety of challenges, such as, distribution control – including grey market detection – and end-user experience (see Figure 1).

The analysis of various product movements generates valuable data for the areas of distribution, supply chain, marketing and production planning. In addition, fraudulent activities in the market can be revealed. The brand-owners receive early warning indicators when products deviate from their authorised distribution channels, providing openings for falsified products to enter the supply chain.

Seal with NFC

For the consumer, calling up information is made easier by simply holding the smartphone above the label with the integrated NFC chip. The chip not only makes product verification and authentication easier, but also increases the security of the label, which is already high-tech.

SECURIKETT's unique market proposition are labels with a printed QR code and NFC chip that are linked to each other. Chip programming is a complex process step, as there is a different printed QR code on every label. You need a high level of knowledge to store the information held in the printed QR code identically on the NFC chip. To guarantee a high level of security, the ID of the chip is linked with the verification code – only one match is possible (see Figure 2).

Pilots in the Asian markets

SECURIKETT is currently working with one of the world's largest spirit producers on an NFC pilot for the Asian market. The brand already uses security labels from SECURIKETT. Proof of initial opening is intended to prevent counterfeiters collecting empty bottles and refilling them with counterfeit alcohol.

“For an innovative company like our customer, it is important to stay ahead by employing the latest technologies. We have worked closely together with this customer for years in order to continually enhance counterfeit protection and customer communication,” says Werner Horn, general manager and head of sales at SECURIKETT. “Multiple codes – concealed and visible – not only increase security but are also successfully used for various end-customer activities such as competitions and bonus programmes, for example, using PIN entry.”

Technically highly complex labels encourage the user to check the authenticity of products in a user-friendly way, and it is intuitive and motivating to do

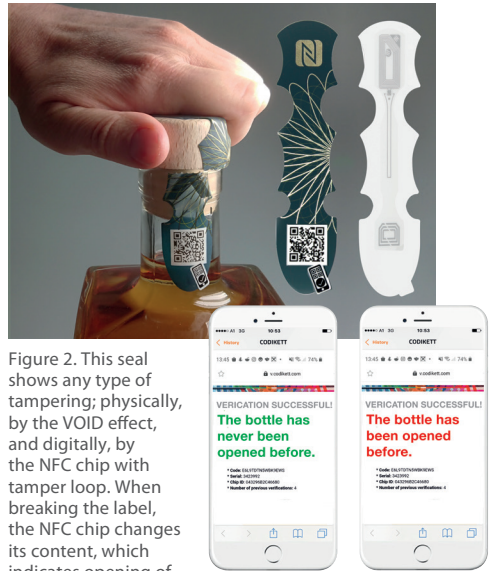


Figure 2. This seal shows any type of tampering; physically, by the VOID effect, and digitally, by the NFC chip with tamper loop. When breaking the label, the NFC chip changes its content, which indicates opening of the bottle. The QR code and NFC chip are linked to SECURIKETT's tracking cloud platform CODIKETT.

so. The label changes irreversibly when it is peeled off from a package, uncovering an additional code. The user, equipped with a smartphone, is then guided through the verification.

In another project, empty bottles are collected in bars and restaurants against a deposit, also to prevent refilling. Thanks to the unique code on every bottle, the brand manufacturer can check whether they are its original bottles. A UHF-RFID chip is being integrated into the label, so that an entire box can be scanned at once. As a result, significantly less effort is required to logistically record how many bottles of which type are in the box. ●

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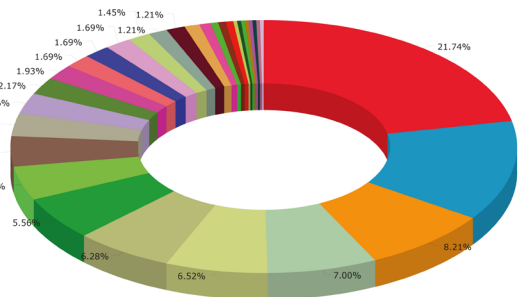


Figure 1. Scans outside sales territory

● UA	90	● CZ	53	● IT	34
● ES	29	● GB	27	● HU	26
● PL	23	● BG	18	● RU	16
● SG	12	● RO	11	● SK	9
● VN	8	● CN	7	● TH	7
● TW	7	● GR	6	● BY	5
● HR	5	● SI	4	● MD	3
● EG	2	● FI	2	● LV	2
● BR	1	● BZ	1	● DK	1
● EE	1	● LI	1	● PT	1
● RE	1	● TR	1		